

# MEDICAL PAPERS,

COMMUNICATED TO THE

MASSACHUSETTS MEDICAL SOCIETY.

TO WHICH ARE SUBJOINED,

EXTRACTS from various AUTHORS, containing  
some of the IMPROVEMENTS, which have  
lately been made in PHYSIC and SUR-  
GERY.

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Published by the SOCIETY.

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NUMBER I.

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MDCCXC.

# MEDICAL PAPERS

CONVINCED TO THE



BY THOMAS AND A. D. W. S.

LIBRARY OF THE  
MEDICAL SOCIETY OF THE  
CITY OF BOSTON



P R E F A C E.

THE experience of more than a century has fully evinced the great utility of literary societies, in promoting the improvement of science ; the establishment of them has therefore been adopted with success, wherever such improvement has been considered as an important object. The progress of numbers when connected in society, and earnestly engaged in the same pursuit, must be far more rapid and more sure, than among an equal number of detached individuals ; as the ardor and emulation which the state of society excites, and the mutual communication and correction of ideas for which it gives opportunity among the former, are entirely wanting with the latter.

IT is therefore to be hoped that the *Massachusetts Medical Society* may produce happy effects, in promoting among ourselves, the improvement of medicine, a science of the greatest importance to the public, but which unhappily, in this country, has hitherto been too little cultivated.

HAVING this improvement in view, the Society early called upon its members and others, to communicate such medical observations of every kind, as might occur in the course of their studies or practice ; and still requests not only members, but gen-

tle men of the faculty and of observation every where, to contribute their friendly assistance in advancing that art, which is the grand object of this institution.

WITH a view to encourage the communication of all extraordinary and important cases that might occur in the practice of the medical profession, Committees of Correspondence were established in the several counties of the State, in 1785, whose duty it is "to meet, correspond and communicate with" any individuals, or any associations of physicians, "that have been or may be formed in their respective counties, and *make report* of their doings from "time to time, *to the Society*, as occasion may require." Several associations have already been formed, from which it is presumed essential advantages will be derived.

THE *Censors*, in conformity to the duty required of them by the act of incorporation and the laws of the Society, have examined a considerable number of candidates for the practice of physic and surgery, many of whom were found duly qualified, and have received the approbation of the Censors, in letters testimonial thereof, and under the seal of the Society.

IN 1787, several of the fellows presented a number of valuable books; since that time, partly by further donations, and partly by purchases, a library

## P R E F A C E.

v

ry has been instituted, consisting of useful and important books in the various branches of the profession; they are now ready to be loaned to the members of the Society, under certain regulations: This establishment, it is not doubted, will greatly serve to diffuse medical knowledge through the Commonwealth.

FACTS and practical observations, made with accuracy and fidelity, are the ground work upon which all theory and practice can safely and securely be founded: Therefore, all accounts of the appearances of new or unusual diseases, or new and unusual appearances and variations attending such as are already known; of diseases peculiar to particular situations; of epidemics, as they appear from year to year; of new methods of treatment, whether successful or unsuccessful; of new medicines, especially of any simples, whether vegetable, animal or mineral, of our own growth; all improvements or discoveries in pharmacy, medical chymistry, or botany; morbid appearances, found in dissecting dead bodies, especially when accompanied, as they always ought to be, with as exact a description of the symptoms and appearances of the previous disease as can be obtained: In short, all new and just observations, connected with medicine or surgery, candidly, clearly and plainly related, will be gratefully received.



AS the society is new, and our country but of modern date, it cannot be expected, that communications should be so numerous, as if it were more advanced, and had a larger and more extensive correspondence.

FROM such communications as have been received, the Society has selected several articles, which are now presented to the public; most of them are such as have an immediate connexion with practice, and have a direct tendency to improve it; and from all of them it is presumed the practitioner may derive some useful information.

SEVERAL of the papers in this number propose new methods of cure, in particular cases, or recommend some new medicine to the attention of physicians: The Society does not undertake to recommend any method of cure pointed out in any of them, or to warrant any of the facts they contain; they are laid before the practitioner, upon the reputation of the writer, and left to the fate they may merit.

THOSE gentlemen who have favored the Society with their communications, will be pleased to accept the thanks due to their exertions for the promotion of the healing art; and may be assured that their future correspondence will be duly noticed.



## P R E F A C E.

vii

AS it is proposed to continue the publication at no very distant periods, several papers now on hand may soon be expected in a future number.

THE Society's principal aim, in this publication, is to make it as useful as possible.

MANY practitioners, may, from their local situation or other causes, be precluded the advantages of an early access to European publications, in the several branches of their profession: It has therefore been thought expedient to subjoin, as an Appendix, a number of extracts from such books as have made their appearance here; which, as they may answer the purpose of communicating a variety of useful improvements and interesting observations in the healing art, it is hoped will not be wholly unacceptable to those who may have already perused them.

# ACT OF INCORPORATION.

COMMONWEALTH of MASSACHUSETTS.

In the Year of our LORD, 1781.

An ACT to incorporate certain PHYSICIANS, by  
the Name of *The MASSACHUSETTS MEDICAL*  
*SOCIETY.*

*AS* health is essentially necessary to the happiness of society ; and  
as its preservation or recovery is closely connected with the knowledge of  
the animal economy, and of the properties and effects of medicines ; and as  
the benefit of medical institutions, formed on liberal principles, and encour-  
aged by the patronage of the law, is universally acknowledged :

Be it therefore enacted by the Senate and House of Representatives in  
General Court assembled, and by the authority of the same, That Nathaniel  
Walker Appleton, William Baylies, Benjamin Curtis, Samuel Danforth,  
Aaron Dexter, Shirley Erving, John Frink, Joseph Gardner, Samuel Hol-  
ten, Edward Augustus Holyoke, Ebenezer Hunt, Charles Jarvis, Thomas  
Kast, Giles Crouch Kellogg, John Lynn, James Lloyd, Joseph Orne, James  
Pecker, Oliver Prescott, Charles Pynchon, Isaac Rand, Isaac Rand, jun.  
Micahijah Sawyer, John Sprague, Charles Stockbridge, John Barnard  
Swett, Cotton Tustis, John Warren, Thomas Welsh, Joseph Whipple, Will-  
iam Whiting, be, and they hereby are formed into, constituted and  
made a body politic and corporate, by the name of *The Massachusetts*  
*Medical Society* ; and that they and their successors, and such other  
persons as shall be elected in the manner hereafter mentioned, shall  
be and continue a body politic and corporate by the same name for-  
ever.

And be it enacted by the authority aforesaid, That the fellows of said  
society may from time to time elect a president, vice president and  
secretary, with other officers as they shall judge necessary and conve-  
nient ; and they the fellows of said society, shall have full power and  
authority, from time to time, to determine and establish the names,  
number and duty of their several officers, and the tenure or estate  
they shall respectively have in their offices ; and also to authorize and  
empower

## ACT OF INCORPORATION.

ix

empower their president or some other officer to administer such oaths to such officers, as they, the fellows of said society, shall appoint and determine for the well ordering and good government of said society, provided the same be not repugnant to the laws of this commonwealth.

*And be it enacted by the authority aforesaid,* That the fellows of said society shall have one common seal, and power to break, change and renew the same at their pleasure.

*And be it enacted by the authority aforesaid,* That they, the fellows of said society, may sue and be sued in all actions, real, personal or mixed, and prosecute and defend the same unto final judgment and execution, by the name of *The Massachusetts Medical Society*.

*And be it enacted by the authority aforesaid,* That the fellows of said society may from time to time elect such persons to be fellows thereof, as they shall judge proper; and that they, the fellows of said society, shall have power to suspend, expel or disfranchise any fellows of said society.

*And be it enacted by the authority aforesaid,* That the fellows of said society shall have full power and authority to make and enact such rules and bye laws for the better government of said society, as are not repugnant to the laws of this commonwealth; and to annex reasonable fines and penalties to the breach of them, not exceeding the sum of *twenty pounds*, to be sued for and recovered by said society, and to their own use, in any court of record within this commonwealth proper to try the same; and also to establish the time and manner of convening the fellows of said society; and also to determine the number of fellows that shall be present to constitute a meeting of said society; and also, that the number of said society, who are inhabitants of this commonwealth, shall not at any one time be more than seventy, nor less than ten; and that their meetings shall be held in the town of *Boston*, or such other place within this commonwealth, as a majority of the members present in a legal meeting, shall judge most fit and convenient.

*And whereas it is clearly of importance, that a just discrimination should be made between such as are duly educated and properly qualified for the*  
*duties*



*duties of their profession, and those who may ignorantly and wickedly administer Medicine, whereby the health and lives of many valuable individuals may be endangered, or perhaps lost to the community :*

*Be it therefore enacted by the authority aforesaid, That the president and fellows of said society, or other such of their officers or fellows as they shall appoint, shall have full power and authority to examine all candidates for the practice of physick and surgery, (who shall offer themselves for examination, respecting their skill in their profession) and if upon such examination, the said candidates shall be found skilled in their profession, and fitted for the practice of it, they shall receive the approbation of the society in letters testimonial of such examination, under the seal of the said society, signed by the president, or such other person or persons as shall be appointed for that purpose.*

*And be it further enacted by the authority aforesaid, That if the said president, and such other person or persons, so elected and appointed for the purpose of examining candidates as aforesaid, shall obstinately refuse to examine any candidate so offering himself for examination as aforesaid, each and every such person so elected and appointed as aforesaid, shall be subject to a fine of one hundred pounds, to be recovered by the said candidate, and to his own use, in any court within this commonwealth proper to try the same.*

*And be it further enacted by the authority aforesaid, That the fellows of said society may, and shall forever be deemed capable in law, of having, holding and taking in fee simple or any less estate by gift, grant or devise or otherwise, any land, tenement or other estate, real or personal ; provided that the annual income of the whole real estate that may be given, granted or devised to, or purchased by the said society, shall not exceed the sum of two hundred pounds, and the annual income or interest of said personal estate, shall not exceed the sum of six hundred pounds ; all the sums mentioned in this act to be valued in silver at six shillings and eight pence per ounce : And the annual income or interest of the said real and personal estate, together with the fines and penalties paid to said society, or recovered by them, shall be appropriated to such purposes as are consistent with the end and design of the institution of said society, and as the fellows thereof shall determine.*

*And*



ACT OF INCORPORATION. M

*And be it further enacted,* That the first meeting of the said Medical Society shall be held in some convenient place in the town of Boston ; and that *Edward Augustus Holyoke*, Esq; be, and he hereby is authorised and directed to fix the time for holding the said meeting, and to notify the same to the fellows of said Medical Society.

In the House of REPRESENTATIVES, October 30, 1781.

This bill having had three several readings, passed to be enacted.

NATHANIEL GORHAM, Speaker.

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In SENATE, November 1, 1781.

This bill having had two several readings, passed to be enacted.

SAMUEL ADAMS, President.

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Approved, JOHN HANCOCK.

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A true copy.

Attest, JOHN AVERY, jun. Secretary.

A LIST

A LIST of the FELLOWS of the MASSACHUSETTS MEDICAL SOCIETY,  
and their Places of Residence.

- \* SAMUEL Adams, *Boston*.  
 Nathaniel Ames, *Dedham*.  
 Nathaniel W. Appleton, *Boston*.  
 Israel Atherton, *Lancaster*.  
 Joshua Barker, *Hingham*.  
 Josiah Bartlett, *Charlestown*.  
 William Baylies, *Digby*.  
 Chauncy Brewer, *Springfield*.  
 James Brickett, *Harverhill*.  
 John Brooks, *Medford*.  
 David Cobb, *Taunton*.  
 Nathaniel Coffin, *Portland*.  
 \* John Cuming, *Concord*.  
 \* Benjamin Curtis, *Boston*.  
 Samuel Danforth, *Boston*.  
 Aaron Dexter, *Boston*.  
 Shirley Erving, *Portland*.  
 William Eustis, *Boston*.  
 Joshua Fisher, *Beverly*.  
 John Flagg, *Lynn*.  
 John Frink, *Rutland*.  
 \* Joseph Gardner, *Boston*.  
 Lemuel Hayward, *Boston*.  
 \* Abner Herfey, *Hingham*.  
 Samuel Holten, *Danvers*.  
 Gad Hitchcock, jun. *Pembroke*.  
 Edward A. Holyoke, *Salem*.  
 Ebenezer Hunt, *Northampton*.  
 Joseph Hunt, *Concord*.  
 Charles Jarvis, *Boston*.  
 Thomas Kast, *Boston*.  
 \* William Kneeland, *Cambridge*.  
 James Lloyd, *Boston*.  
 Thaddeus Maccarty, *Worcester*.  
 Samuel Mather, *Westfield*.  
 \* Joseph Orne, *Salem*.  
 Joseph Osgood, *Andover*.  
 Oliver Partridge, *Stockbridge*.  
 James Pecker, *Boston*.  
 Oliver Prescott, *Groton*.  
 \* Charles Pynchon, *Springfield*.  
 Isaac Rand, *Cambridge*.  
 Isaac Rand, jun. *Boston*.  
 Thomas Rice, *Pownalborough*.  
 Nathaniel Saltonstall, *Harverhill*.  
 Samuel Savage, *Barnstable*.  
 Erastus Sargent, *Stockbridge*.  
 Micajah Sawyer, *Newbury Port*.  
 \* John Sprague, *Newbury Port*.  
 John Sprague, *Dedham*.  
 Marshall Spring, *Watertown*.  
 Charles Stockbridge, *Scituate*.  
 John B. Swett, *Newbury Port*.  
 John Swett, *York*.  
 David Townsend, *Boston*.  
 \* Simon Tufts, *Medford*.  
 Cotton Tufts, *Weymouth*.  
 John Vanhorne, *West Springfield*.  
 John Warren, *Boston*.  
 Benjamin Waterhouse, *Cambridge*.  
 Henry Wells, *Montague*.  
 Thomas Welsh, *Boston*.  
 Joseph Whipple, *Boston*.  
 Thomas Williams, *Roxbury*.  
 William Whiting, *G. Barrington*.  
 Samuel Willard, *Uxbridge*.  
 \* Edward Wyer, *Cambridge*.

HONORARY

N. B. Those with this mark (\*) are deceased.

## HONORARY MEMBERS of the MASSACHUSETTS MEDICAL SOCIETY.

JOSHUA Brackett, Esq. Physician,	<i>Portsmouth.</i>
Ammi Ruhamah Cutter, Esq. Physician,	<i>Portsmouth.</i>
Hall Jackson, Esq. Physician,	<i>Portsmouth.</i>
M. John Feron, A. A. S.	<i>Paris.</i>
Rev. Manasseh Cutler. A. A. S.	<i>Ipswich.</i>
* John Morgan, M. D.	<i>Philadelphia.</i>
Benjamin Rush, M. D. Professor of Chymistry at the University of Pennsylvania,	<i>Philadelphia.</i>
William Shippen, Professor of Anatomy, Surgery and Midwifery at the University of Pennsylvania,	<i>Philadelphia.</i>
Adam Kuhn, Professor of Materia Medica and Practice of Physic at the University of Pennsylvania,	<i>Philadelphia.</i>
John Jones, M. D.	<i>New York.</i>
Dr. Charles M <sup>c</sup> Knight,	<i>New York.</i>
* Dr. Ebenezer Crosby,	<i>New York.</i>

N. B. Those with this mark (\*) are deceased.

## OFFICERS of the MASSACHUSETTS MEDICAL SOCIETY, elected in June, 1789.

HON. Cotton Tufts, M. D. *President.*

Isaac Rand, Esq. *Vice President.*

Isaac Rand, Esq. Edward A. Holyoke, M. D. Dr. Samuel Danforth, Hon. John Brooks, Esq. John Warren, M. D. Dr. Thomas Welsh, and Dr. Nathaniel W. Appleton, *Counsellors.*

John Warren, M. D. *Corresponding Secretary.*

Dr. Nathaniel Walker Appleton, *Recording Secretary.*

Dr. Thomas Welsh, *Treasurer.*

Aaron Dexter, M. D. *Vice Treasurer, Librarian, and Cabinet Keeper.*

Hon. Oliver Prescott, Esq. Dr. Samuel Danforth, Dr. Isaac Rand, jun. Charles Jarvis, Esq. and Dr. Lemuel Hayward, *Censors.*

CONTENTS



## CONTENTS OF NUMBER I.

### A R T I C L E I.

Page

*AN Account of the Weather and of the Epidemics at Salem, in the County of Essex, for the Year 1786. To which is added, a Bill of Mortality, for the same Year. By Edward A. Holyoke, M. D. A. A. S. and Fellow of the Massachusetts Medical Society.* 17

### A R T I C L E II.

*An Account of the Ulcerated Sore Throat, as it appeared in the Town of Dighton, County of Bristol, in 1785 and 1786. By Hon. William Baylies, A. M. A. A. S. and Fellow of the Massachusetts Medical Society.* 41

### A R T I C L E III.

*Experiments made with the common Cow Parsnip, (spondylium vulgare hirsutum. Park. C. B.) in Cases of Epilepsy. By the late Joseph Orne, A. M. A. A. S. and Fellow of the Massachusetts Medical Society.* 48

### A R T I C L E IV.

*An Account of the successful Treatment of a Paralysis of the lower Limbs, occasioned by a Curvature of the Spine. By Nathaniel W. Appleton, A. M. A. A. S. and Fellow of the Massachusetts Medical Society.* 56

### A R T I C L E V.

*Remarks upon the superior Advantages of covering, with the Skin, parts recently exposed. By the late Dr. Edward Wyer, Fellow of the Massachusetts Medical Society.* 59

ARTICLE



# CONTENTS.

25

## ARTICLE VI.

Page

*A Case of Empyema, successfully treated by the Operation.  
By Isaac Rand, Esq. Vice President of the Massachusetts Medical Society.*

66

## ARTICLE VII.

*Observations on the Hydrocephalus Internus. By Isaac Rand, jun. A. M. and Fellow of the Massachusetts Medical Society.*

69

## ARTICLE VIII.

*An Account of a preternatural Obstruction in the Vagina.  
By Dr. Joseph Osgood, Fellow of the Massachusetts Medical Society.*

85

## ARTICLE IX.

*Curious Facts respecting Worms. By Thomas Welsh, A. M.  
and Fellow of the Massachusetts Medical Society.*

87

## ARTICLE X.

*A Case of Calculus in the Ureter, together with another of  
the sudden Growth of the Stone, consequent upon the In-  
troduction of a foreign Body into the Bladder. By Hon.  
William Baylies, A. M. A. A. S. and Fellow of the  
Massachusetts Medical Society.*

90

## ARTICLE XI.

*An Experiment for determining the Expediency of the Si-  
gaultian Operation. By the late Joseph Orne, A. M.  
A. A. S. and Fellow of the Massachusetts Medical Society.*

93

## ARTICLE XII.

*An Account of an Aneurism in the Thigh, perfectly cured by  
the Operation, and the Use of the Limb preserved. By  
Thomas Kist, A. M. and Fellow of the Massachusetts  
Medical Society.*

96

## APPENDIX.

## A P P E N D I X.

- Extracts from an Essay on the Uterine Hæmorrhage which precedes the Delivery of the full grown Fœtus. By Edward Rigby, Member of the Corporation of Surgeons in London.* 99
- An Account of the Disorder occasioned by drinking cold Water in hot Weather. By Benjamin Rush, M. D.* 115
- An Account of the external Use of Arsenic in the Cure of Cancers. By the same.* 117
- An Account of the Efficacy of common Salt in the Cure of Hæmoptysis. By the same.* 121
- A Case of Hæmoptysis, in a Letter from Mr. Jones, Surgeon at Birmingham, G. B. to Dr. Duncan, at Edinburgh.* 123
- On Incontinence of Urine. From Manning's Modern Improvements in the Practice of Physic.* 124
- Extract of a Letter from Dr. Hamilton, of Lynn Regis, to Dr. Duncan at Edinburgh, giving an Account of a successful Method of treating Inflammatory Diseases, by Mercury and Opium.* 125

*Observations on Phthisis, & Pulmonary  
his, and the Use of the Hydrostatic Bath  
in the Treatment of that Disease, with  
Practical Remarks on the Use of the  
Tepid Bath; by Isaac Rand, M.D. 129*

CONTENTS—NO. II. PART I.

ARTICLE I.

*A Medical Discourse on several narcotic vegetable substances, read before the Massachusetts Medical Society, at their annual meeting, June 4th, 1806. By Joshua Fisher, M. D. Vice-President of the Society.* 1

ARTICLE II.

*An Account of a case of ruptured uterus. By Oliver Prescott, jun. A. M. Fellow of the Massachusetts Medical Society.* 13

ARTICLE III.

*A Case of compound dislocation of the tibia, at the ankle joint, accompanied with a fracture and loss of part of the fibula, and likewise with a fracture of the femur in two places. By Richard Hazeltine. F. M. M. S.* 24

ARTICLE IV.

*Narrative of a case of preternatural retention of urine, in consequence of external injury. By James Thacher, Fellow of the Massachusetts Medical Society.* 35

ARTICLE V.

*History of a wound of the femoral artery. By John C. Warren, Fellow of the Massachusetts Medical Society.* 40



## ARTICLE VI.

*Some Observations on worms infecting the human body. Communicated to the Essex Southern District Medical Society, July 1, 1806. By Joshua Fisher, M. D. Vice-President of the Massachusetts Medical Society.*



CONTENTS—NO. II. PART II.

ARTICLE I.

- Observations on the lymphatic distention of the lower extremities of women, while in the puerperal state. By Dr. Wyer.* 1

ARTICLE II.

- The History of a retroverted uterus. By Edward Augustus Holyoke, M. D.* 13

ARTICLE III.

- Account of a thread round a child's neck. By John Bartlett, of Roxbury.* 19

ARTICLE IV.

- An Account of an extravasated tumour on the labium pudendi, soon after delivery. By the late Dr. Osgood of Andover.* 22

ARTICLE V.

- History of an hæmorrhage from a rupture of the inside of the left labium pudendi. By Dr. Nathaniel W. Appleton.*

ARTICLE VI.

- Case of tetanus, from the puncture of a tendon in the foot; cured by amputation. By Dr. Josiah Bartlett, of Charlestown.* 26

## ARTICLE VII.

- A remarkable Uterine Case. By Dr. George Osgood, of Andover.* 30

## ARTICLE VIII.

- Case of strangulated crural hernia, operated on according to the method of Don Antonio Gimbernat, with some observations on the treatment of hernia. By John C. Warren.* 44

## ARTICLE IX.

- Case of calculi in the bladder of a boy. By Dr. Josiah Bartlett.* 53

## ARTICLE X.

- On the vesicating properties of the Potatoe Fly. By Dr. John Gorham.* 55

## ARTICLE IX.

- A Case of schirrhous testis cured by electricity. By Matthias Spaulding.* 66

## MISCELLANEOUS.

- Report of a Committee of the Counsellors,* 67  
*Medical Intelligence and Notices.* 70  
*List of Fellows.* 79

## APPENDIX.

- Report on Vaccination, read at the annual meeting of the Massachusetts Medical Society, June 1, 1808.* 89



## MEDICAL PAPERS.

### A R T I C L E I.

*An Account of the WEATHER and of the EPIDEMICS, at SALEM, in the County of Essex, for the Year 1786. To which is added, a BILL of MORTALITY, for the same Year. Communicated by EDWARD AUGUSTUS HOLYOKE, M. D. A. A. S. and Fellow of the Massachusetts Medical Society.*

SALEM, JUNE, 1787.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

VERY soon after its institution, the Massachusetts Medical Society called upon its members, to communicate their observations on the diseases, especially the epidemics, which fell under their notice.

B

IN



## 18 MEDICAL COMMUNICATIONS.

IN compliance with this call, I have continued my observations,\* and now forward to you such, as another year has furnished me with ; together with a pretty full account of the weather, and the variations of the seasons, the thermometer and barometer, &c. for each month.

THIS account takes up perhaps a larger proportion of this paper than many may think useful : Yet as it is not to be expected that every physician who has it in his power to give you an account of diseases, should be at the trouble of making meteorological observations ; and as those made in one spot, may probably answer for a considerable tract of country round, I thought it best to be so particular : For if diseases, especially epidemics, depend in a great measure upon the state of the atmosphere, as it is commonly supposed they do ; and if others of the faculty in the vicinity should, agreeably to the desire of the society, communicate observations made at the same time with these, I think a particular account of the weather must be useful, as being applicable to all such communications.

AND it were much to be wished that practitioners would more generally than they do, commit to paper their thoughts and remarks upon diseases as they arise, and communicate them to the Society ;

\* Doctor Holyoke has communicated similar observations for the years 1782, 1783, 1784, 1785, 1787, and 1788.

tiety ; which, though doubtless it would be attended with some labor, yet this labor would be amply rewarded by the benefit which would accrue to themselves, their patients, and the art they profess. The observations of many, made at the same time, and in different parts of the country, and continued for a course of years, must, when collected and compared together, throw a great deal of light upon many points, which are now involved in much obscurity, and would doubtless be the readiest and most effectual method of furnishing materials for a history of those diseases which are either epidemical or endemical in our country. Indeed the joint efforts of many engaged in the same design, may accomplish, in a few years, what would be impracticable to a few individuals, though employed for ages.

I HAVE only now to add, that in enumerating the diseases which occurred in each month, I have recited them in the order of their frequency ; and that all such are left out of this account, as happened less than three times in the month, unless here and there a single instance of a disease is noted, on account of its singularity. So that this is not to be looked upon as an enumeration of all the diseases which appeared among us in the course of the year, (perhaps not above the half or two thirds of them) but only an account of those which did most commonly occur.

M, DCC, LXXXVI.

## JANUARY.

ON the 2d day, a small earthquake in this vicinity; and on the 3d, a storm at N. with much snow, and another on the 30th, at S. with much rain; snow also on the 5th and 15th, and a little on three or four days beside. Prevailing winds between the N. W. and S. W. not one third of the month in a more easterly direction; eight or nine days of clear, dry and dephlogisticated air; three foggy days; not very cold in general, but the 17th, 18th, and 19th, intensely cold; the  $\varnothing$  in my thermometer (Fahrenheit's) sunk to  $-11^{\circ}$ , and in another thermometer in town to  $-20^{\circ}$ , and was never, at any time during these three days, higher (abroad in the shade) than  $10^{\circ}$ . The greatest change in the thermometer, in any one day, was on the 31st, from  $44^{\circ}$  in the morning, to  $16^{\circ}$  at 10h. P. M.  $=28^{\circ}$  abroad.

	Abroad.	In house.	
Thermometer highest on 29th,	46°	44°	} at noon.
lowest on 18th,	5° 5	12°	

MEAN heat of the month abroad,  $24^{\circ} 8$ .

THE  $\varnothing$  in the barometer but moderately variable until the 18th, after which more unsteady: The greatest change in 24 hours from 30th to 31st, 0 inches, 65 decimals, lower.

BAROMETER highest on 20th, 30in. 30dec.—lowest on 23d, 28in. 95dec.

THE



## MEDICAL COMMUNICATIONS. 21

THE most common disorders this month, which was a healthy one, were bad coughs, fevers, chiefly ephemeræ, and those of a mild moderate kind; abscesses, scrophulæ fugaces, odontalgia, dyspepsia, rheumatisms, dolores secundariæ; besides a few instances of cynanchæ malignæ, colic, suppressed menses, hysteria, diarrhœa, and cutaneous eruptions.

### FEBRUARY.

SNOW storms on the 5th, 6th, and 14th, at N. E. and on the 20th at S. E. in which very large quantities of snow fell, and another on the 24th at N. E. Two appearances of aurora borealis. Winds about two thirds of the month between N. W. and S. W. none remarkably high. About seven or eight days clear, fair, dry, dephlogisticated air; a good proportion of agreeable weather; no rain, except a little on the 5th. No very cold weather through the month. The greatest variation of the thermometer was on the 15th, viz.  $15^{\circ}$  warmer abroad in nine hours.

	Abroad.	In house.	
Thermom. highest on 10th,	$47^{\circ}$	$45^{\circ}$	} at noon.
lowest on 1st,	$22^{\circ}$	12th $27^{\circ}$	

MEAN heat of the month, (at three observations)  
 $28^{\circ} 6$ , abroad.

NO remarkable variations in the barometer; the greatest on the 20th, from 29in. 95dec. to 29in. 47dec.

BAROMETER

## 22 MEDICAL COMMUNICATIONS.

BAROMETER highest on 2d, 30in. 10dec.—lowest on 20th, 29in. 47dec.

THIS month was very healthy ; we had some mild febrile disorders, cynanchæ malignæ, colics, and coughs ; after pains in puerperal women ; several hectical cases ; scrophulæ fugaces ; pleurifies ; a few asthmatic, and worm cases ; and, which was remarkable, two instances of fatal ileus.

### M A R C H.

A SNOW storm on 2d, at N. E. another which began on the 4th, at S. E. and ended on 5th, at N. E. very violent ; besides which, very little snow. Rain fell on the 2d, 16th, 27th, 29th, and 31st. Foggy on four days ; six auroræ boreales, and an uncommonly beautiful one on the 22d. Winds from the western board rather more than half the month ; five or six days they were peculiarly penetrating, sharp, and raw ; such as prevail in no other season of the year ; frequently very high, as usual in this month. Weather variable ; sometimes cold, raw, and windy ; at other times, exceedingly pleasant : No very cold weather during the month ; but the 25th and 26th remarkably warm, and the air smoky and hazy. The greatest change in the thermometer on the 26th, from 3h. to 10h. P. M. 28° colder.

Thermom,

## MEDICAL COMMUNICATIONS. 23

	Abroad.	In house.	
Thermom. highest on 26th,	78°	64°	} at noon.
lowest on 11th,	31°	33°	

MEAN heat of the month (at three observations)  
39° 7, abroad.

THE changes in the barometer were not remarkable ; the greatest on 16th, from 29in. 90dec. to 29in. 45dec. from morning to night.

BAROMETER highest on 14th, 30in. 15dec.—lowest on 3d, 29in. 05dec.

DYSPEPSIÆ, coughs, odontalgia, and worms very frequent ; next in frequency were febrile disorders, chiefly pleuritic, pleurodynæ, colics, and rheumatic complaints ; then scrophulæ, mild cynanchæ malignæ, cephalalgia, diarrhææ, convulsions and gastrodynæ ; several hæmoptoses, hysteria and cutaneous eruptions. About the middle of this month, the chin cough made its appearance ; one instance of nyctalopia, in a lad of 16. The month rather sickly.

### A P R I L.

ON the 1st and 2d a most violent storm at N. E. in which twelve or fourteen inches of snow fell ; another of rain on the 18th and 19th, from the same quarter ; beside which, rain on six other days. Aurora borealis on five evenings ; fog on two days ; very few tolerably pleasant days : From the 17th  
to



24 MEDICAL COMMUNICATIONS.

to 26th a tedious series of cold, damp, raw, rainy weather; prevailing winds from the eastward; a shower, with thunder and lightning, on the 24th: Temperature of the air in general equable and very disagreeable. The temperature of April is commonly more equable than any other month of the year, as I have frequently observed. The greatest variation of the thermometer on the 10th,  $23^{\circ}$  in seven hours abroad, from cold to warm.

	Abroad.	In house.	
Thermom. highest on 28th,	$63^{\circ}$	$56^{\circ}$	} at noon.
lowest                    2d,	$30^{\circ}$	$33^{\circ}$	

MEAN heat of the month (at three observations)  
 $47^{\circ} 2$ , abroad.

THE  $\varnothing$  in the barometer remarkably stationary; the greatest variation in one day, from the 2d to 3d, oin. 78dec.

BAROMETER highest on 3d, 30in. 03dec.—lowest on 25th, 29in. 10dec.

PERTUSSIS was now epidemical amongst children; nor did adults escape, for several suffered severely by it; some fevers of no great consequence among children; bad coughs, brought on by the long continuance of damp, raw weather; a number of which terminated in phthisis, and several others escaped with difficulty; many dyspepsiæ, cephalalgia, and oppressions at the breast; a few colics, abscesses, and rheumatic cases.

M A Y.

M A Y.

ON the 6th and 7th a storm at N. E. with much rain, and showers on four days beside ; two days foggy ; two auroræ boreales ; very few pleasant days, but much raw, cold, cloudy, disagreeable easterly weather ; almost constantly easterly winds ; spring rather backward ; greatest variation of heat on 26th, 17° colder from noon to night.

	Abroad.	In house.	
Thermom. highest on 27th,	71° 31'	63°	} at noon.
lowest 6th,	48°	52°	

MEAN heat of the month abroad (by three observations) 57° 2.

SMALL variations in the barometer ; the greatest in 24 hours, from 6th to 7th, 0in. 40dec.

BAROMETER highest on 30th, 29in. 99dec.—lowest 7th, 29in. 30dec.

THE chin cough, which first appeared in March, was now highly epidemical ; several of the younger patients were seized with convulsions, and a few carried off by them ; the method which I found most successful, after trying several, was to exhibit first an emetic of turp. mineral. (when the patient was able to bear the operation) joined with a few grs. of pulv. ipecac. and soon after small doses of kermes min. with a small addition of flor. benzoin, every six or eight hours ; and in the intervals one, two or three tea spoonfuls of a moderately strong solution

## 26 MEDICAL COMMUNICATIONS.

solution of gum. ammoniac. Many were relieved by this method, who appeared to be in the greatest danger; though it must be confessed that some received but little, and others no benefit from it: Fevers of various forms, chiefly pneumonic and rheumatic, were common; bad coughs were frequent, as also dyspepsiæ; then diarrhæas, cephalalgia, and worms; catarrhal disorders and defluxions on the breast; then abscesses, odontalgia, scrophulæ, and mild dysenteric disorders; a few menorrhagiæ, abortions, and hysteria; and several epilepsies,

### JUNE.

NO considerable rains, but showers on six several days; none great; a little thunder on four days; Fogs on five days; three appearances of aurora borealis; moderate winds, chiefly between N. W. and S. W. about a third of the month was fine agreeable weather, and pretty hot; about three or four days the air much phlogisticated, damp and sultry; the rest of the month rather cool, damp and disagreeable: The greatest variation of the thermometer, the ☿ sunk from 3h. to 10h. P. M. 30°.

	Abroad.	In house.	
Thermom. highest on 4th,	93°	85°	} at noon.
lowest 15th,	71°	10th 65°	

MEAN heat abroad, (by a mean of three observations) 71° 8.



## MEDICAL COMMUNICATIONS. 27

THE  $\varnothing$  in barometer very stationary ; greatest change in 24h. 0in. 28dec.

BAROMETER highest on 16th, 29in. 90dec.—lowest on 12th, 29in. 33dec.

CHIN cough still continues to be the prevailing disorder ; dyspepsia was more frequent than I ever recollect it to have been. After the exhibition of such evacuants as were thought proper, I found the columbo root given in substance, to be extremely beneficial in numerous instances. Various species of pyrexia, among which were a few synochi, some slow fevers, several pleurifies and rheumatic fevers : Diarrhæas, vomitings and purgings, and colicky complaints, common : Hectical cases and bad coughs, numerous : Then abscesses, menorrhagiæ, ophthalmiæ, and hæmoptoses ; next scrophulæ vulgares and amenorrhœæ. One instance of hydrophobia in a boy of three years old, who had been bit in the right cheek about five months before, by a dog, who in a few days after died with all the marks of rabies ; this child died in great distress about twenty six or twenty eight hours after its aversion to water was discovered.

### JULY.

RAIN on 18th and 27th. Several showers beside, attended with a little thunder and lightning on four other days ; fogs on two days ; aurora borealis on seven evenings ; most prevalent winds from the west,

28 MEDICAL COMMUNICATIONS.

west, though frequent easterly turns ; two or three fultry dog days, and three or four dry, dephlogisticated ones. About a third of the month, the air was damp, and the winds blew gently from the eastward ; a great deal of cool weather for this season ; but about five days that might be called very hot ; the season rather dry the former part of the month, but towards the latter part, vegetation very good ; but few grasshoppers this month. Two remarkable changes from hot to cold, one on the 12th, thermometer at four o'clock, P. M. at  $82^{\circ}$ , and at 7h. the same evening, at  $59^{\circ}$ , and on the 27th, at noon,  $89^{\circ}$ , and at 10h. P. M. down to  $64^{\circ}$ .

	Abroad.	In house.	
Thermometer highest on 16th,	$91^{\circ} 5$	$85^{\circ}$	} at noon.
lowest 18th,	$60^{\circ}$	$64^{\circ}$	

MEAN heat of the month (by a mean of three observations)  $71^{\circ} 3$ .

BUT small variations in the gravity of the atmosphere ; the greatest change in barometer, in 24h. 0in. 19dec.

BAROMETER highest on 31st, 29in. 93dec.—lowest on 16th, 29in. 45dec.

PERTUSSIS which still continued epidemical, was in many instances attended with fever, which though sometimes threatening, seldom proved mortal ; several children who had had the disease a long time,  
and

and appeared to be almost recovered, had the cough return upon them again with great violence ; but these relapses seldom proved very lengthy, commonly continuing bad, but about a week or ten days. Disorders of the alimentary tube, viz. diarrhœa, dyspepsia, and gastrodynæ were very rife ; some dysentericæ, cholæræ dysentericæ, nausææ, and vomitings ; pleurodynæ, bad coughs and hectic complaints. Abscesses, ulcusculæ oris in children, vertigos, scrophulæ and odontalgicæ. Rather sickly.

# AUGUST.

RAIN on five days, and a few slight showers beside ; two days foggy ; four appearances of aurora borealis ; many easterly winds, though more frequently from the western quarter, and none high, nor any storm through the month ; much damp weather, and scarcely one third of the month pleasant, although we had but four or five dog days ; no very hot weather, and on the whole a very cool August ; a little thunder and lightning on 23d. The greatest change in the thermometer on the 6th, 17° in 10h. from warm to cool, in the open air.

	Abroad.	In house.	
Thermom. highest on 6th,	88°	84°	} at noon.
lowest 31st,	62°	60°	

MEAN heat of the month (by a mean of three observations) 69°.



## 30 MEDICAL COMMUNICATIONS.

THE  $\varnothing$  in the barometer pretty steady ; the greatest change in 24h. 0in. 31dec.

BAROMETER highest on 28th, 30in. 01dec.—lowest on 12th, 29in. 33dec.

PERTUSSIS much the same as in the last month ; cholera dysenterica, (as in a former communication I took the liberty to denominate this disease) now epidemical amongst teething children, and like that of the last season, was not attended with such a degree of vomiting as formerly, and gave way very kindly to the vitr. antim. cerat. in small doses, as last year : Pyrexia numerous, such as a short mild fever, slow fever, synochus, pleuritis, febricula pustulata and ophthalmia : Dyspepsia and diarrhæa common ; a number of abscesses, tormina, worm cases, arthrodynia, epilepsies, asthmas, mania, &c.

ONE instance of the true scurvy in a lad returned from a fishing voyage, in which he had been employed about twelve weeks : This is a singular occurrence with us, as I do not remember to have seen for near forty years, any one person concerned in the cod fishery come home with this disease till now. This patient had a foul stinking breath, swelled bleeding gums, loose teeth, bloated pale fallow countenance, purple spots upon the lower limbs, swelled legs, great weakness and indisposition to action, &c. &c. He soon recovered by the help of a vegetable and fruit diet, a few mild purges, &c.

SEPTEMBER.

SEPTEMBER.

NO storms this month ; on 12th a good deal of rain, and on 18th and 19th a little ; a small thunder shower on 5th ; fog on 19th ; two auroræ boreales ; winds most commonly from the western board, though frequently interrupted by easterly breezes, but no brisk gales ; much dry agreeable weather ; but two or three dog days, and a very few hot, and not a third of the time damp ; the greatest change from cool to warm on the 30th,  $18^{\circ}$  in 7 hours.

	Abroad.	In house.	
Ther. highest on 2d & 30th,	$80^{\circ}$	30th, $74^{\circ}$	} at noon.
lowest	24th, $59^{\circ}$	$59^{\circ}$	

MEAN heat of the month, (at three observations)  
 $61^{\circ} 5$ .

THE variations of the barometer, for six months past, but small ; the greatest in any 24 hours this month, 0in. 48dec.

BAROMETER highest on 8th, 30in. 06dec.—lowest on 11th, 29in. 18dec.

FEVERS, for the most part, of a mild low kind, very numerous ; none of which however, ended fatally ; a few pleurifies ; cholerae dysentericæ rife ; diarrhæas, abscesses, and dysentericæ frequent ; pertussis still continues, and very frequent relapses into it ; when this disease proved mortal, the child was commonly carried off with convulsions : Of all the patients

### 32 MEDICAL COMMUNICATIONS.

patients who had this distressing cough this season, few or none became tabid : Colics, gastrodynæ, and worms, common ; a number of scrophulæ, cutaneous eruptions, dyspepsiæ, abortions, hæmoptyses, convulsions, epilepsies, little ulcers of the mouth, and hecticafes : Two sailors imported the Guinea worm from Africa ; one case of catalepsy. Rather sickly.

#### OCTOBER.

A SHORT and not violent storm of rain at S. E. on the 6th, and a very little rain on two or three other days ; two or three inches of snow fell on 30th : Fog on one day ; four very smoky days ; four auroræ boreales, and two dog days : Winds chiefly from S. W. W. and N. W. seldom high ; some weather unseasonably hot about the middle of the month, which in general was pleasant.

		Abroad.	In house.	
Thermom.	highest on 1ft,	83°	76°	} at noon.
	lowest 31ft,	40°	43°	

MEAN heat of the month, (by a mean of three observations) 55° 2.

CHANGES in the barometer but moderate, greatest in 24 hours, 0in. 50dec.

BAROMETER highest on 25th, 30in. 13dec.—lowest on 6th, 29in. 04dec.

PYREXIÆ



## MEDICAL COMMUNICATIONS. 33

PYREXIÆ were numerous, some of which were very mild, and ran a course of one or two weeks only; some were synochi, many others began with a pleuritic type, but degenerated into a long, tedious slow fever, of three, four or five weeks continuance; the event, however, was very favourable: Dysenteries were common and happy in their termination; cholerae dysentericæ still frequent, and much more fatal this month than the last; worms in children, vomitings, dyspepsiæ, diarrhææ, abscesses, and gastrodynæ were next in frequency; then odontalgia, head aches, cutaneous eruptions, ulcuscula oris, and sore throats; a very few cynanchæ malignæ, and tonsillares; one patient with nyctalopia; pertussis disappeared, after a continuance of seven or eight months.

### NOVEMBER.

NO storms or high winds, which is remarkable, as there are generally more in this month than in any other; rain on five days, but the springs were remarkably low, and there was great complaint for want of water in wells and ponds. Some snow on four days; four auroræ boreales: Winds from S.W. W. and N.W. above two thirds of the month: Weather very variable, though more than a third was fair and dry; no hot weather, but some uncommonly cold, and the winter set in early: The greatest variation in the thermometer was on the 28th, from 34° to 6° in 7 hours, abroad.

C

Thermom.

## 34 MEDICAL COMMUNICATIONS.

	Abroad.	In house.	
Thermom. highest on 7th,	59°	55°	} at noon.
lowest 28th, 10° 29th 19°			

MEAN heat of the month, (by three observations)  
33° 4.

VARIATIONS of the barometer but small; the greatest in 24 hours, 0in. 52dec.

BAROMETER highest on 26th, 30in. 09dec.—lowest on 10th, 29in. 19dec.

FEVERS of various types frequent, as long low flow fevers, a mild moderate fever of a much shorter period, synochus, pleuritis; abscesses numerous; scrophulæ, diarrhææ and odontalgia; next hysteria, worms, cynanchæ malignæ of favourable event, gripes, and agues in face; several sore throats and cutaneous eruptions; a few cholera dysentericæ, which is remarkable so late in the year. A man of seventy years, carried off suddenly by angina pectoris.

### DECEMBER.

TWO very violent storms at E. and N E. in which an immense quantity of snow fell, viz. on the 4th and 5th, and on 9th and 10th, and the air being cold, prodigious damage was done by them, both at sea and on shore; during the first there was a remarkable high tide; another storm of rain and snow on the 23d and 24th; a little snow also fell on the  
8th

8th and 13th, and a little rain on four other days ; one foggy day ; two auroræ boreales ; winds from the westward much the greatest part of the month, and not very high ; about ten days of clear dry weather, though but about five or six pleasant days ; much severe cold, and two or three stormy turns ; prodigious quantities of snow on the ground, which made travelling difficult, the roads being almost impassable ; the greatest variation of thermometer from 12th to 13th,  $31^{\circ}$  warmer in 24 hours.

		Abroad.	In house.	
Thermom.	highest on 31st,	$45^{\circ}$	$43^{\circ}$	} at noon.
	lowest 12th,	$17^{\circ}$	$20^{\circ}$	

MEAN heat of the month, (by a mean of three observations)  $26^{\circ} 7$ .

BAROMETER more variable than for several months past ; greatest change in one day,  $0^{\circ} 61$ .

BAROMETER highest on 10th, 30in. 34dec.—lowest on 24th, 29in. 36dec.

THIS month remarkably healthy ; few, or no febrile disorders ; the most common complaints were abscesses, coughs and cutaneous eruptions ; then vomitings and purgings, and scrophulæ amongst children ; a few opthalmiæ, pleurodynæ, cephalalgæ, and ulcusculæ oris : Also, several lenteries brought from the West Indies.



## 36 MEDICAL COMMUNICATIONS.

THE winter was not remarkably cold, but the ground was covered very deep with snow ; the spring cold, damp, and backward ; the summer remarkably cool, and rather dry ; the autumn in the former part warm, the latter part cold.

THE mean heat of the year, in the open air,  $48^{\circ} 87$ .

TO an account of the diseases to which we are incident in this place at the present day, it may not be improper to subjoin a few words respecting such as seldom or never do happen, and of such as were frequent formerly, but seldom or never make their appearance here at present.

THE first I shall mention is the *rickets*. This disease was formerly (about thirty five or forty years ago) pretty common here, and more especially among negro children, as I very well remember ; but is now become so rare that I have not seen it, more than three or four times, these eight or ten years, according to the best of my remembrance. Dr. Glisson, and others, the first writers upon rickets, inform us, that it first made its appearance about thirty years before they wrote, i. e. about the year 1620, in the counties of Dorset and Somerset, in Great Britain ; which, if true, shows it to be of very modern date : And from a *chart of the fatal diseases, &c. in London*, collected and published by Dr. William Black, it appears that it has been gradually declining in that city, these seventy or eighty

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ty years past, particularly from 1702 to 1717, (a period of fifteen years) there died of the rickets 3916; and that from 1762 to 1777, (another period of the same length) there died only 104. All these observations seem to indicate an utter extinction of this scourge of infants.

ANOTHER is the *colica pictonum*, or dry belly ach, as it was commonly called. This painful and distressing complaint, till about twenty four or twenty six years ago, was so frequent, that it was no uncommon thing to have six or eight, or more patients, ill of it in the course of a winter; (the season in which it mostly prevailed, though it was not confined to cold weather :) But now for these twelve or fifteen years back, I imagine there has not been five persons ill of it in this town, if we except a very few who dealt in lead, and who it was evident, derived their disease from that source, such as painters, &c. This species of colic was formerly attributed to hard drinking; and it is certain that persons addicted to spirituous liquors were generally the subjects of it; but its present scarcity cannot be owing to an increase of temperance; for it is a melancholy truth I fear, that intemperance is as prevalent at this period, as it has been these forty years. Query—Can this difference be accounted for, from the very general disuse of pewter? Pewter is a factitious compound metal, containing a large proportion of lead, and lead is universally allowed to be one very common

### 38 MEDICAL COMMUNICATIONS.

mon cause of this kind of colic : Now formerly the most usual drinking vessel in the houses of the poor was a pewter quart pot, and those made use of in eating, such as plates, dishes, basons and porringers, were almost wholly of the same material, and these not always kept in the nicest order, but were often, at least the pot, covered on the inside, with a thin coating of rust, or a sort of cerufs. But the use of pewter is now very much laid aside, and in the revolution of fashion, has given way to the more modish stone, or (as it is commonly called) Queen's ware.—The matter seems worth inquiring into.

BOTH the last mentioned diseases, I am informed, are as much rarer in some of the neighbouring towns, as they are in this ; as to others I have no information ; nor how the case is in the more distant parts of the country. Perhaps it would be interesting to inquire, what diseases have become extinct, or very rare among us, and what new ones have succeeded in their room.

INTERMITTING FEVERS of our own growth we see none of here, though thirty five or forty years ago, they sometimes occurred.

TYPHUS, both *mitior* and *gravior*, of Dr. Cullen, were frequent with us, especially in the autumn, from twenty five to thirty five years ago, and proved fatal to many in the vigour and prime of life ; it is now, comparatively, very rare.

SCURVY



## MEDICAL COMMUNICATIONS. 39

SCURVY is a disease we very seldom meet with : Sailors sometimes return from sea with it, and for the most part recover very soon ; but I have never met with more than a very few instances of it generated here at home, in the course of my practice.

PUERPERAL FEVER very seldom occurs here ; it has not shown itself perhaps more than twice or three times these ten years past.

I SHALL conclude with observing, what I suppose must have been observed by all the elder practitioners among us, that acute diseases are much less frequent as well as less fatal than formerly ; and that chronic diseases, particularly *Phthisis pulmonalis*, have taken their place ; and that although our species descend to the grave by paths, a little different from the old ones, yet they arrive at it no faster than formerly, as our bills of mortality, in proportion to our numbers, are by no means increased.

### BILL of MORTALITY, for the Town of SALEM, for the year 1786.

#### DEATHS.

January,	7	August,	12
February,	12	September,	12
March,	13	October,	10
April,	13	November,	6
May,	17	December,	13
June,	12		—
July,	12		139

#### DISEASES.

40 MEDICAL COMMUNICATIONS.

DISEASES.

Inflammatory fever,	2	Convulsion,	3
Slow nervous fever,	4	Palsy,	2
Mixed fever,	5	Insanity,	1
Hydrocephalic fever,	1	Asthma,	2
Fevers, (species unknown)	5	Hooping Cough,	13
Inflammatory quinsy,	1	Dropfy, viz.	
Putrid quinsy,	3	Anasarca,	2
Inflammation in the thorax,	4	Ascites,	2
Angina pectoris,	1	Pulmonary Consumption,	20
Inflammation in the abdomen,	1	Hectical Decay,	7
Abscess in the thorax, (vomica)	1	Atrophy,	6
Alvine fluxes, viz.		Cancer,	1
Cholera morbus,	2	Worms,	2
Cholera dysenterica,	9	Canker, (Apthæ)	2
Dysenteria,	3	Still born,	6
Diarrhæa,	2	Casualties, viz.	
Lientery,	2	Murdered,	1
Colic, viz.		Executed,	1
Ileus,	2	Drowned,	1
Spasmodic,	1	Diseases unknown, 16;	
Calculi,	1	of which 10 were of infants within the month,	16
Trismus infantum,	1		139

ARTICLE

A R T I C L E II.

*An Account of the ULCERATED SORE THROAT, as it appeared in the Town of DIGHTON,\* in the Years 1785 and 1786. Communicated by Hon. WILLIAM BAYLIES, A. A. S. and Fellow of the Massachusetts Medical Society.*

DIGHTON, JUNE, 1787.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

THE ulcerated sore throat came amongst us in the month of August, 1785, and continued through the ensuing winter till the autumn of 1786. It did not spread with rapidity, but commonly seized three or four families in a neighbourhood, and then leaped over into a very different one, returning back again perhaps in the space of two or three months. It usually invaded children, but adults did not wholly escape. Women were more subject to it than men. The seizure was, for the most part, very sudden: The patient, from a complete state of health, would be reduced in a few minutes to an inability of sitting up. A pain in the head, back, and joints, faintness, nausea, vomiting, foreness of throat, and rigors, would often make their assault at the same instant. The pulse soon becomes accelerated,

\* County of Bristol.



ated, and very precipitate, though not full or hard. The eyes grow red and watery, similar to those in the measles. In twenty four hours, or less, the tonsils are much swelled, having been very red from the beginning, with their tops corroded, and specked with white ; the fauces, also, are much inflamed, with here and there a spot of white, which finally turn out eating ulcers ; the uvula is, sometimes, in the same condition ; and the tongue is covered with a white or yellow mucus. The glands under the ears become largely tumified, and are very hard to the touch. The quickness of the pulse still increases, with great heat, some degree of restlessness, a short, panting, laborious breathing with a peculiar kind of noise, and a greater heaviness of the eyes, which are followed, towards the close of the second day, with an universal eruption of red, fiery, itching pimples, which are very close together, and the small spaces between them much inflamed. More than half of the adults, and a very few children, were free from this eruption. Upon its taking place, the restlessness is diminished, and respiration becomes more easy ; but there is no abatement of the other symptoms. The heat with thirst increases ; deglutition is rendered more difficult ; the tumors enlarge ; and a delirium attends, commonly in the night only, till about the latter end of the fourth, or on the fifth day, when a copious sweat arises, which in a few hours terminates the disorder. The eruption

tion turns pale, the cuticle falls off in scales, and, not seldom, that of the hands and feet cohering : The pulse regains its ease and slowness, though slightly embarrassed towards night for a day or two : The swellings of the glands gradually subside, but may not entirely disappear in a fortnight : Respiration is performed without labour : The tongue is clean and moist ; expectoration of a thick matter ensues ; the ulcers in the throat cast off their sloughs, and appear almost healed ; the appetite returns, and the patient, by the seventh or eighth day from the first attack, recovers his usual health. Sometimes a looseness, instead of the sweat, forms the crisis, and a few instances occurred, where they jointly contributed to the solution of the fever.

As to the cure, I always found an emetic given as soon as possible, to be of great service. The disease ran its course with more ease, regularity, and fewer alarming symptoms than when omitted. In one instance of a youth of fourteen, a vomit of tart. emet. put an entire end to the fever, the eruption, notwithstanding, succeeding at the usual time. Ipecac was the emetic generally exhibited, assisted by a free use of warm water.

AN emollient clyster, sharpened at times with sea salt, was daily administered. A cathartic was seldom given, unless an urgent diarrhæa made a dose or two of rhubarb necessary.

#### 44 MEDICAL COMMUNICATIONS.

A HOT room, or a current of air, were equally to be avoided. The patients were allowed a free use of all kinds of vegetable acids. Vinegar whey, a little warmed, they were enjoined to drink, especially through the night. They also drank an infusion of flaxseed and hyssop, sweetened with honey, whenever a cough attended, which was not uncommon.

A POWDER of crèm. tart. and camphor, and the saline draught, made with vinegar, were given through the whole complaint, without variation, unless the symptoms were highly inflammatory; in which case, nitre was substituted for the cream of tartar. They generally required a quieting draught at night. If the pulse flagged towards the acmé, an addition was made of sal succin. tinct. myrrh. and an infusion of the wild valerian, or the spirits of mindereri. Pediluvia were constantly used in the evening, and, at times, sinapisms.

BLISTERS were never used, except in a retrocession of the eruption; at which time, success always attended their application.

THE marine acid, so far diluted with water, and dulcified with honey as to make it palatable, served for the gargarism. The sick, by its allaying the tormenting heat and dryness of the throat, and bringing on an agreeable cool sensation, expressed the highest approbation of the medicine.

WHEN



WHEN this disease was amongst us, about fourteen years ago, mercurials and antimonials were given with a success truly astonishing : But at this time, the quick, weak and hurried pulse, the rapid progress of the complaint, and the great irritability of the nervous system, deterred me from the use of them, especially mercurials. And finding the above method answer extremely well, I confined myself to it.

ON the third or fourth day of the disease, should the pulse grow weaker and softer, the face and neck put on a very bloated appearance, respiration grow more laborious, with a peculiar kind of catching the breath or double breathing; and an anxiety of five or six minutes continuance, come on three or four times in an hour, such as induces the patient to bite his hands and arms, death may be expected on the fifth day. This alteration in the disorder is sudden, and not to be foreseen, and, when taken place, I was never so fortunate as to find a medicine that would prevent, or even retard the fatal catastrophe. The skin, after death, would immediately turn very black, and sometimes, previous thereto, would be spotted in many places with green.

IF on the fifth day the crisis is not complete, and the fever and quickness of pulse, though moderated, still keep on to a certain degree, we may then expect a suppuration of the tumid glands under the ears.

## 46 MEDICAL COMMUNICATIONS.

ears. This often happened when there was no eruption. These tumors must now be ripened as fast as possible : A poultice of white bread, milk, and castile soap, or Indian meal with milk and water, answers this purpose. Before this time, I never directed any external application to the throat. During this period they drink a decoction of the woods, and are indulged with a little wine. In a week or ten days, the tumors are sufficiently matured to be opened ; after which they may be dressed with any digestive. The bark can now be given with effect. I knew of but one who died of these ulcers ; which happened about six weeks after the seizure. The ulcerations were large, the absorption of matter great, and his knees and ancles greatly inflamed, and about suppurating, when the child was obliged to submit to fate. In a few cases at first, I attempted to carry off these swellings by attenuants, blisters, and purges ; but the consequences rather confirmed the maxim—*It is sometimes very dangerous for art, to undertake to defeat a suppuration which nature is preparing.*

IN a day or two after the crisis, even when complete, many were seized with swelled wrists and ancles, accompanied with redness and great pain, in every respect similar to an acute rheumatism. This was commonly brought on by exposing themselves to wet rooms or a damp air. A decoction of sarsaparilla, the bark of the root of saffrafras, garden scurvy

scurvy grafs, and the branches of fever wood, would often rout this enemy in twenty four hours. It operated by sweat.

MANY of the sick were also subject, in a day or two after the crisis, to an universal tumefaction: From head to foot the cellular membrane would be puffed up like a bladder. At this time they made but little water. Those who had been slightly affected with the ulcerous sore throat, were as liable to this complaint, as those who had been ever so roughly treated by it. Neither could I perceive that any irregularity in their conduct could be assigned as the cause. Though its appearance was alarming, it never proved fatal. A powder of crude sal ammoniac and squills exterminated it in fourteen days.

THIS disease, within the compass of my observation, never attacked the same person twice. Although it was evidently contagious, yet many were seized who had not been in the way of infection. I could not determine, though particularly attentive to that matter, the length of time the infection required to manifest its effect.

AMONG the many medicines in high estimation with the common people, and used by them without the advice of the physician, I know of none worth the least consideration, excepting the marsh rosemary, or, as it is commonly called, marsh root.

This



## 48 MEDICAL COMMUNICATIONS.

This, in a large dose, operates as a vomit ; in a smaller, proves a powerful expectorant ; and, from its sensible qualities, one would suppose it to possess considerable antiseptic powers. I am well assured it was the basis of a medicine used by a physician in Providence, with very great success, in this complaint. It is undoubtedly of great efficacy, and deserves a more thorough investigation.



### A R T I C L E III.

EXPERIMENTS *made with the common Cow Parsnip, (spondylium vulgare hirsutum, Park. C. B.) in cases of EPILEPSY. Communicated by the late JOSEPH ORNE, A. M. A. A. S. Fellow of the Massachusetts Medical Society, and Physician at Salem.*

S A L E M, OCTOBER, 1783.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

SO many medicines having been lately pointed out for the cure of epilepsy, all of which we presume to be in some instances ineffectual, I hope no apology need be offered for recommending to farther trials a plant of the growth of our own country, which I believe has produced very essential relief

lie in this disease. I shall therefore take the liberty to communicate a detail of those cases in which it has been prescribed, with the event of the exhibition in each.

THE plant referred to is the *common Cow Parsnip*, *Sphondylium vulgare hirsutum*, Park. C. B. It grows in hedges ; the stalk is large and tubular, invested with a down, which also covers the leaves, that are large and jagged, five on each stalk, and of the colour of wormwood ; it is umbelliferous, and flowers in June ; the root is divided into several long fibrous branches, resembling a large parsley root ; and the height of the plant in its maturity, may be from two to four feet : The root has a rank strong smell, and a pungent and almost caustic taste ; it should be carefully distinguished from the common parsnip, that grows wild in gardens, and hedges, and indeed, it has a very different appearance.

C A S E I.—1772.

G. S. a laborer, aged 30 years, of a slender habit, but healthy, coming out of a deep well (in which he had continued an hour to clear it) felt himself chilly, sick at the stomach, and vomited copiously. The nausea, with a disinclination to exercise, and a great degree of weakness, continued about five weeks, and then in the evening, after a day of labor, he was seized with a severe fit of epilepsy. I saw him just as it was going off, and as I knew nothing of the

D

preceding

preceding circumstances, finding his pulse full, I bled him ; he presently recovered his understanding, and as he made no great complaint, but seemed sleepy and declined taking any medicine, I left him. The next day he followed his labor, and felt as well as before. In a few weeks he had a second, and after a short interval, another paroxysm ; and perceiving his memory, or rather his faculty of recollection greatly impaired, he was much alarmed, and applied for advice. As he still complained of nausea, and was costive, I directed a vomit, and afterwards some aloetic medicines, with soap, &c. Soon after, however, his disease returned, and by advice of an eminent physician, he took large doses of camphire in tinct. sac. besides a liberal use of valerian, volatile alkali, &c. The progress of the complaint seemed rather accelerated, till wearied with the disease, and distrusting the efficacy of medicine, he began to despair ; when one of his neighbours confidently urged him to try *Cow Parsnip*, alledging that it had lately cured his wife of a similar complaint (though in fact it was only an hysterical indisposition) and encouraged him to expect a cure of it also : He forthwith began the use of it, and apparently with great and immediate advantage : He first felt himself relieved of flatulence, which had constantly attended him ; from confused vertiginous symptoms, which had greatly increased since the latter paroxysms, and when very violent  
always



always announced a fit at hand, though he was sometimes seized without a moment of warning: His strength and spirits returned; his faculties became brighter; and, unless after great fatigue, or long fasting, (as he works hard, and is not of the firmest habit) he has never suffered a single return. For five or six years he has been perfectly free, excepting that he is liable to giddiness and trembling; but by returning to his medicine, finds infallible relief. I saw him only a few days since; he complained then of "*the fits working in him,*" to use his own phrase; said he must take his medicine soon, and seemed to depend on its efficacy with the securest and most implicit confidence.

C A S E II.—1773.

W. R. aged eighteen years, of that habit which has been denominated phlegmatic; pale, and of lax fibres, after labor in the field in a hot day, and drinking immoderately of small beer, was suddenly struck down with a fit, which, from the description, I believed to be of the epileptic kind. I saw him afterwards in several paroxysms, and they were truly such. I bled this patient, and vomited him repeatedly; gave him quinquina, eleutherium, stomachics of every kind, steel in various forms, directed the cold bath, and inoculated him with the small pox, which produced a long pause; I therefore cut two issues soon after, and to close the whole, he took

52 MEDICAL COMMUNICATIONS.

the *Cow Parsnip* very liberally, and with great confidence ; yet his epileptic shocks still recur, and he is now by turns an idiot or a maniac.

C A S E III.—1774.

J. P. a lad of twelve years, of delicate irritable fibres, and liable to incontinence of urine during his sleep, had been for two years afflicted with epilepsy. Besides all the applications enumerated above, among which the *Cow Parsnip* had a very fair trial, the good women gave him a whole human placenta, dried and pulverized, which they declared would do wonders, but in vain ; the disease continued obstinate, and the lad was cured at length by a voyage to sea. This patient was one of those who are invaded with the fits only during sleep. From some late conversation with Dr. Holyoke, who has succeeded in three or four cases of this kind with a very different medicine, I suppose it is another species of the disease.

C A S E IV.—December, 1782.

J. D. about forty years of age, suddenly fell down in a state of insensibility. I was called instantly, and found him under a complete and severe paroxysm of epilepsy : In two or three weeks he had a second attack ; and by the last of March he had eight fits, so that they had become habitual. I gave him only a vomit at each return, as his stomach was liable to be disordered ; for he was not only intemperate,

perate, but very irregular in his manner of living, eating voraciously at some times, and starving at others, as opportunity or necessity determined him ; and constantly chewing great quantities of tobacco. Having heard that the flowers of zinc had lost reputation among the medical gentlemen at Boston, and knowing nothing then of the cuprum ammoniac, of the success of which, in this disease, some cases are related in the last volumes of the Edinburgh Medical Commentaries, I determined to wait till the season for gathering the *Cow Parsnip*, and try it fairly ; because I had once known it to succeed, which I could not say of any other medicine that I had ever given to an adult epileptic subject. About the 10th of April, 1783, till which time the accessions grew more frequent, he began the use of it : He was then much debilitated in body ; his mental faculties were perceptibly impaired, and his aspect and manners indicated a most pitiable declension of the general constitution. From the time he used the *Cow Parsnip* he has never had a single return of his complaint ; he feels none of that confusion and vertigo, which he always considered as the signs of an approaching paroxysm ; his general health is good ; his faculties perhaps as vigorous as before, and the whole appearance of the man essentially improved. Once after long fasting, and great fatigue, being surprised in a small fishing boat by a storm, he felt himself extremely disordered, and confidently



## 54 MEDICAL COMMUNICATIONS.

confidently predicted a new accession of his disease, of which he has the severest terrors ; but a warm supper, and a more liberal potation of his medicine, restored him to his wonted calmness. I ought not to omit that excepting the disuse of tobacco, he never changed his habits of living.

### C A S E V.

IN May, 1783, I directed the *Cow Parsnip* to a girl, eighteen or twenty years old, said to have suffered several attacks of epilepsy. I questioned the person who applied to me, and believed that to be her disease ; since then I have conversed with the patient, and those who have seen her in the fit, and they very exactly describe the epilepsy. She was always in ill health, from the first invasion, till she used this medicine ; complained of loss of appetite, anxiety, distress, and trembling in the region of the stomach, &c. Since then she has been entirely free from every complaint : But it is remarkable, that having expended her first supply, and being obliged to remit the use of it for eight or ten days, her unfavorable symptoms returned ; but were removed as soon as she could have recourse to the medicine. I saw her a few weeks since ; she was then in good health.

I HAVE commonly prescribed two or three drachms of the pulverized roots to be taken every day

day for a great length of time, and a strong infusion of the leaves and tops to be drank at bed time. The patient in the fourth case chewed it, instead of tobacco, constantly.

ON reading this plain narrative of five epileptic patients, three of whom seem to have derived essential relief from the medicine here recommended, while two others received not the smallest advantage, it is obvious to remark, that in different subjects the disease may be specifically different. But although it has been in my way to have seen the trial of the cow parsnip oftener than any physician of my acquaintance ; and as matter of novelty, and curiosity, I have minutely attended to its effects in all these cases, yet I cannot point out any of those pathological distinctions which are to determine when it may be most expedient to advise it ; unless we may be guided in the prescription, by this circumstance, which I well remember, that in the three fortunate cases the patients were remarkably liable to flatulence, with symptoms of morbid sensibility of the stomach ; and date their first relief from the sensation of a more firm and healthful tone of that organ, and the camianative effects of the medicine. If what is here related shall induce any gentleman to make trial of it, I shall be happy to be confirmed in the opinion that it is a medicine of great efficacy, and will perhaps not unfrequently be found to produce very agreeable effects.

## A R T I C L E IV.

*An Account of the successful Treatment of a PARALYSIS of the LOWER LIMBS, occasioned by a curvature of the SPINE. Communicated by NATHANIEL W. APPLETON, A. M. A. A. S. Fellow of the Massachusetts Medical Society, and Physician at Boston.*

BOSTON, OCTOBER, 1786.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

IN the course of the present year, a case of paralysis of the lower limbs has occurred to my practice. I now take the liberty to communicate it, for your inspection ; probably the success attending the treatment, may induce others to try the like method in similar cases.

JOHN ———, a negro boy, born in this town ; at the age of ten months could go alone, and appeared in every respect a well formed and healthy child, until he was about twenty two months old, at which time he was observed to falter in his steps and to trip up, without any evident cause, when walking across the floor. Upon endeavoring to stand upright, his ancles and knees grew stiff, and he



he would pitch forward. When held up by the arms he would point his toes forward, throw his body back, and in that position allow himself to be moved onward, but without touching his heels to the ground. At this time, viz. about 15th last March, I was sent for to visit him, and upon finding his complaints as mentioned above, immediately suspected his disorder to arise from, or be accompanied with, a curvature of the spine; a disease particularly treated of by *Pott*, in some of the late editions of his chirurgical works, and called a paralyfis of the lower limbs. Upon viewing the child's back, there was evidently a curvature of the dorsal vertebræ; also an oblong swelling nearly the size of an hen's egg, situated between the base of the right scapula, the lower vertebræ of the neck and upper of the back, which gave him some pain when handled. In addition to most of the symptoms mentioned by that author, there was an almost constant and very painful erection of the penis, especially when put upon his feet; he was not able to turn himself in bed, and when sitting in a chair, would bend his head forward almost to meet his knees. Several medical gentlemen of my acquaintance visited the child with me; we all agreed that this was a proper subject for a trial of *Pott's* method of treatment.\* Accordingly on 25th March, I applied two caustics, each of the size of a nine penny

\* *Vide* the chirurgical works of Percivall Pott, F. R. S. Vol. III. page 393. Lond. 1783.

## 58 MEDICAL COMMUNICATIONS.

ny piece, one on each side of the middle of the dorsal vertebræ, about two inches apart. In a few days the eschars threw off. After some time and trouble the issues began to discharge, and the patient remained much the same, until about three months after the running commenced; at which time all the bad symptoms began to lessen; he could turn himself in bed, and could walk a little by holding of the chairs, &c. exactly similar to a young child's first learning to go alone. He has now entirely recovered the use of his limbs, and is apparently as well as ever, or as any other child of his age. One of the issues healed up in a few weeks, the other remains open; the tumor mentioned above has almost disappeared, and gives no pain when handled.\*

\* The issue remained open twelve months; the tumor has disappeared, and the patient been well ever since.—*March, 1790.*

ARTICLE

A R T I C L E V.

*Remarks upon the superior advantages of covering with the skin, parts recently exposed. Communicated by the late Dr. EDWARD WYER, Fellow of the Massachusetts Medical Society, and Physician at Halifax, Nova Scotia.*

HALIFAX, DECEMBER, 1784.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

AMIDST the many improvements that are daily made in the different branches of our profession, the great success which has been found to follow attempts to cover large denuded surfaces (after capital operations) with the natural skin, instead of lint and other substances, appears to demand particular attention.

A PAMPHLET\* lately published in England upon an improved method of amputating, and treating the stump, was sent me shortly after it made its first appearance. The plan proposed, appeared to me so rational, that I determined to try it whenever a proper

\* Practical observations upon amputation and the after treatment. By Edward Alanson, surgeon to the Liverpool infirmary. Lond. 1779.



60 MEDICAL COMMUNICATIONS.

proper case should occur. Shortly after, I had occasion to amputate a leg, and an arm ; I proceeded as the author (Mr. Alanson) directs : The very favourable event surprised several of my medical friends, who were spectators of the whole process. The stump of the leg was completely healed in sixteen days, the arm in three weeks. I am confident there was not secreted, upon both stumps together, so much as four ounces of pus ; the patients never complained of the least pain in removing the dressings, or did a single unpleasant symptom occur from the amputation of either.

As I presume the pamphlet I have mentioned has been seen by the faculty in New England, I think it needless to repeat the particulars of my procedure in the above cases, when I affirm that I followed in every particular, the method therein recommended.

IN a child of four years of age, I lately cut for the stone, the cure was completed by the first intention in the course of thirty days, without the least inflammation or formation of matter.

A FRIEND of mine in London, has lately sent me a case in which it was necessary to apply the trepan. The bone was first laid bare, by dividing the scalp with a crucial incision, and then dissecting back the four corners ; care was taken to leave the pericranium on every part, but just where the bone was

was to be taken out. After removing the extravasated blood from the dura mater, the parts were carefully cleansed by a soft sponge, and warm water ; then the four flaps of skin, with the adhering cellular membrane which had been turned back, were brought into their proper places, and secured by strips of sticking plaister ; they soon united with the pericranium, and the cure was completed in less than half the time, which is generally found necessary in the usual way of proceeding in similar instances.

THE case I have now taken the liberty of laying before your society, appears to me a most convincing proof of the great propriety of endeavoring in every case, which will admit it, to cover with the skin, such parts as have been laid bare in any kind of injury, or operation.

ON the 15th of November, 1784, M. Reed, aged 45, desired my opinion, of a large swelling situated upon the back side of the middle of the left thigh. She informed me it had been gradually forming seven years ; that its increase lately had been very rapid ; it was free from pain, but was very inconvenient when she either sat or walked.

I FOUND the swelling in the place mentioned ; its size was about that of two fists, the figure conical ; it measured about seven inches in circumference at the basis ; was about five inches high, and terminated

62 MEDICAL COMMUNICATIONS.

terminated in a point like the dug of a cow : The colour of the body of it was white ; towards the end it was of a deep red ; it had the usual feel of a steatomatous tumor, and seemed to originate below the surface of the thigh.

FROM a consideration of its situation, which was at some distance from any large vessels ; of its increase, which lately had been rapid ; and of her general health, which was good, I advised an immediate removal of it. She consented, and on the following day I did it ; first making a longitudinal incision, and then dissecting it out, in doing which, I had occasion to lay bare a portion of the pectineus, and part of the two lesser heads, of the triceps femoris muscles. As my patient was possessed of great fortitude, I took my own time, and dissected out the cyst complete ; two small arteries were divided, which were easily stopt by the fingers of an assistant. I was very careful to save as much skin as possible, a precaution I have often experienced the utility of, in different operations. Upon cleansing the cavity with a sponge and warm water, it appeared very large, and gave me good reason to expect considerable time would be necessary to complete the cure.

INSTEAD of cramming the wound with lint, &c. as is the custom after most large operations, I made an attempt to bring the opposite edges of the skin  
into



## MEDICAL COMMUNICATIONS. 63

into contact; I found it might easily be done. I now thought this a good case, in which to try what might be effected, in attempting to cover so large a cavity with the skin, and effect a reunion by the first intention, without the interposition of any foreign body whatever. I accordingly retained the opposite sides of the skin, and cellular membrane, by several stitches at about an inch distance from each other, the edges fortunately fitted very exactly; I left the most depending corner open as a drain; the wound was then covered with dry lint, over that a compress, and the whole secured by the common spiral bandage.

THE next day I found my patient walking in the yard, without the least pain. I immediately ordered her to bed, and enjoined perfect rest, fearing the stitches might be broke out by motion. As the dressings remained as I left them the day before, I made no attempt to remove them. On the day following, I found the dressings moistened with a discharge; I now removed them, and found the edges of the wound in perfect contact; not the least swelling or inflammation; no fever, nor any one unpleasant symptom. I applied a small pledgit of wax and oil, and left her in bed, but was told at my visit the next day, that she was too well to be confined. I dressed her as before: Judge what must have been the satisfaction I felt, upon handling the part, to find that the cavity seemed in

64 MEDICAL COMMUNICATIONS.

a manner obliterated ; that the corner I had left open, was the only appearance of a wound ; that the matter discharged was good, though rather copious ; that a complete reunion had taken place ; in a word, that there was not the least drawing or stretching upon moving the leg ; that she could eat, drink, and sleep, and was in good spirits, thinking herself almost well.

I GAVE her the bark, to obviate the consequences of a too free discharge, and still enjoined rest.

I CONTINUED to dress her as above, for ten days longer, at which time the lower corner was closed, not the least deformity remained, and she was discharged in perfect health, in twelve days from the operation.

UPON opening the tumor after it was removed, a fatty substance was found, contained in a complete cyst.

THAT parts possessing the principle of life, when deprived of their natural covering, and kept in contact, will readily unite, is proved not only by many experiments made to ascertain the fact, but also by daily experience in practice.

THAT to a muscle, nerve, tendon, or blood vessel, laid bare by any means, a softer and less irritating substance cannot be applied than that of the skin and cellular membrane, is determined beyond dispute.

THAT

THAT granulation proceeds most rapidly where there is least irritation, is a fact generally admitted.

THAT the quantity of pus depends upon that particular configuration of vessels, which inflammation produces, all allow.

AND, that the inflammation will depend upon the degree of irritability of the parts, and the degree of stimulus applied to them, is extremely obvious.

THE conclusions I would draw from the above particulars, are, that in every instance where the skin can any way be brought to cover parts lately exposed, the consequences will be, the saving the patient much pain and inflammation; and if the part is extremely irritable, perhaps frequent spasms, and considerable fever. The granulation by which the loss of substance will be restored, will be much more rapid, and all or most of the disagreeable consequences of large discharges, sloughing of the neighbouring parts, &c. will by this method of dressing be in a great measure prevented. To support these conclusions, I think the case I have related might with propriety be quoted; but every gentleman who has been in the habit of seeing much business, must be convinced of the superior advantages of the method I followed in this case to those commonly used in similar instances.



66 MEDICAL COMMUNICATIONS.

IT affords a pleasant reflection that our art, like the art of war, is humanized in a degree not known in former ages ; and that the freedom of inquiry so generally admitted at this day, joined to the liberal manner in which each individual appears disposed to communicate his discoveries to his brethren, are the sources from which we have derived, and may still continue to derive, the most useful information.



A R T I C L E VI.

*A Case of EMPYEMA, successfully treated by the Operation. Communicated by ISAAC RAND, Esq. Vice President of the Massachusetts Medical Society, and Physician at Cambridge.*

CAMBRIDGE, MAY, 1783.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

IN May, 1756, James Monro, an apprentice to a blacksmith, in Cambridge, was seized with a pleuro peripneumony. The third day of the disease I saw him, bled him that and the next day, and with the usual treatment, the complaints partially terminated the seventh, by expectoration. I saw him occasionally from time to time, until the 8th of June :

## MEDICAL COMMUNICATIONS. 67

June: He then went to his parents at Lexington, and continued there about fourteen days, in which time he grew much worse. June 27th, late in the evening, I was desired to visit him, and was informed that two days before, when his brother was helping him from his horse, something had broken within him, but had no discharge by the mouth; I was much surprised to find his thorax so largely distended, and attended with vast difficulty of respiration, which threatened suffocation; upon pressure from side to side, or from the back to the breast, there was an evident fluctuation of a great quantity of fluid, and no expectoration. I proposed, as the only method of relief (the operation for the empyema) which I could suggest. He was very averse to it; but after a little reflection, as he was conscious that he was in extreme danger, he consented. Being called so late in the evening, and not being provided for the operation, as I was then three miles from home, deferred it until the next morning. I saw him early, and nothing having occurred to prohibit the evacuation of the fluid, I made an opening of three quarters of an inch, at the usual place on the left side, as his complaints had been most severe there, (no one part being more prominent than the other) and discharged about five pints of thick pus. As he began to faint, I stopped the orifice, and secured the dressings with proper bandage. On the second morning the discharge was about the same quantity; on the third

## 68 MEDICAL COMMUNICATIONS.

morning about two quarts, and at each time flowed with great violence. On the fourth morning I found him very faint ; a great quantity of pus had been discharged ; had wet through the feather and straw bed, and near a quart of pus ran on the floor. Upon removing the dressings, I was much surprised to find a part of the lungs (as big as a nutmeg) protruding through the orifice in the side, in a mortified state ; and as in desperate cases, doubtful and bold methods may be pursued, I extracted the part of the lungs, until I discovered the termination of the diseased part, and cut it off close to the uninfected part, and then replaced it in the thorax, and secured the dressings in such a manner, as to prevent the like accident again. On the fifth day from the opening his side, he received the fumes of pulv. G. thuris, mastich. myrrh. et oliban. through an inverted funnel into his lungs by his mouth, and in nine days the fumes past through his lungs and came out at the orifice in his side ; during which time he took no medicine but a decoction of cort. peruv. the abscess and the external opening healed in sixteen days, and he recovered his usual state of health. In the month of October following he went as a soldier to garrison fort Cumberland, in Nova Scotia ; was there eighteen months ; returned in good health, and has followed his business of a blacksmith ever since. He is subject to the asthma, but it is a family disorder.

ARTICLE



A R T I C L E VII.

*Observations on the HYDROCEPHALUS INTERNUS,  
Communicated by ISAAC RAND, jun. A. M.  
Fellow of the Massachusetts Medical Society, and  
Physician at Boston.*

BOSTON, APRIL, 1789.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

THE hydrocephalus internus is a disease, so insidious in its attack, often rapid in its progress, and fatal in its termination, that any hints arising from the inspection of the parts diseased, that may tend to point it out in its access, and contribute to a more successful mode of practice than the present, I doubt not will be candidly received by physicians.

I HOPE to throw some light upon the disease, in the following observations, upon the appearances of the internal parts of the head of S. W. who died of an acute hydrocephalus internus, the 20th of January, 1789, whom I first saw in the second stage of the disease, the 10th of the month. The 21st I inspected the head in presence of Dr. Kest.

AFTER

AFTER the integuments of the cranium were removed, the bones, instead of a blueish white, appeared rather of a florid color ; and when separated from the dura mater, the vessels of the internal parts of the cranium were turgid with blood : But there was no effusion of blood or water between the dura mater and the cranium, or between the membranes and brain. The dura and pia mater were inflamed ; the vessels to their remotest series in the convolutions and plicatures of the cerebrum and cerebellum were very much distended with blood ; and upon removing the hemispheres of the cerebrum, we found, under the corpus callosum, in the lateral ventricles, between two and three ounces of a pellucid lymph, which gushed out with great force ; and upon gently moving the head from side to side, a fluid, tinged with blood, flowed out to the amount of almost an ounce. The other parts were in a natural state.

THE hydrocephalus internus has been esteemed by most physicians, except the late Dr. Fothergill, a chronic disease. In this child it was evidently an acute one. I had never before seen this disease in so young a child,\* although I have attended seven with it : One adult, a miss of ten years, and five, all females, between five and three years of age ; in all of whom it was an acute disease, except the adult.

FROM

\* Eighteen months.

FROM the rather florid appearance of the external and internal parts of the bones of the cranium, the plethoric state of the vessels of the meninges of the brain, is it not probable that the effusion of water into the ventricles of the brain, was the effect of inflammation or plethora of the vessels of the brain; than that the pressure of the water in the ventricles was the cause of inflammation of the meninges? In support of this opinion, I would observe\* the plexus choroides is a vascular web, consisting of a great number of arterial and venal ramifications, partly collected in two loose fasciculi, which lie one in each lateral ventricle, and partly expanded over the neighbouring parts; and continued in part into the third ventricle; from which structure any inflammation or plethora of the vessels of the brain in young subjects, or adults of a lax irritable habit, will more probably produce an effusion of water into the ventricles, than any other parts of the brain: For by the great distension of the sanguiferous arteries, the lymph will be exhaled in too great quantities for the lymphatics to absorb; the consequence of which will be a dropsy of the ventricles of the brain. May we not thence infer that the hydrocephalus internus is a consequence of, and not an idiopathic disease? † Wepferi historiae apoplecticorum furnish instances of the ventricles being partly filled with lymph, and  
the

\* Winflow's Anatomy of the Brain.

† Historiae apoplec. hist. secunda, tertia et quarta.



the plexus choroides being turgid with blood, and otherwise diseased. Morgagni\* *de causis et sedibus morborum per anatomen indagatis*, in epistola de apoplexia serosa, mentions the plexus choroides being turgid with vesicles of water; and subjoins, at No. 33, "*sed tu fortassis cum iis facis qui aquæ effusionem malunt nunquam apoplexiæ causam esse sed effectum ejusdem causæ, quæ apoplexiam facit, ut puta sanguinis in vasis quæ in cerebro et circa cerebrum sunt restitantis.*"†

THE proximate causes of the inflammation and plethora of the vessels of the meninges of the brain, are

\* Morgagni *de causis et sedib. morb. in epistola duodecima de hydroceph. interno.*

† "The parts of the body are successively evolved; the head, which for several purposes of the animal economy, is first evolved, and comes first to its full size. This certainly happens from the vessels of the head, being in respect of capacity and density, suited to that end; and consequently in the first part of life, the blood is determined, in a proportionally greater quantity, into the vessels of the head, than into other parts of the system; and it is sufficiently probable, that this proportion is greater as the animal is nearer to its origin, and continues greater till the body attains its full growth."\* After the bones of the cranium are so far ossified as to prevent any further enlargement of its contents, the chylopoetic system still generates such a quantity of fluids, as not only to repair the waste of the body by exercise, &c. but to contribute to its increase, till it has attained its acmé. In infancy, therefore, there is a greater disposition to a plethora of the vessels of the brain, which renders that age more subject to disease, terminating in hydrocephalus internus, than perhaps any other stage of existence.

\* Cullen's *Materia Medica*. Distribution of the Fluids, Art. III.

are an increased action of the vessels in the system in general ; an inflammatory diathesis ; suppressed excretions ; violent exercise ; unnatural positions of the body and head ; a spasm upon the superficial vessels ; the exposure of the naked head to the sun, and whatever may directly stimulate the membranes of the brain.

THE diagnostic is of the utmost importance, especially in the first stage ; as we may infer from the many histories of unsuccessful cases, although attended by the most eminent of the profession in Europe and America ; and I fear ever will be, unless we can discover the disease before it arrives at the second stage, when the pulse begins to be slower than natural, and irregular : Then every effort will prove abortive, as the effusion of the lymph then begins to take place in the ventricles of the brain.

CHILDREN, and some adults of irritable habits, are the subjects of it.

IN the first stage the pulse is quick, sometimes hard and feverish ; the head is always hot from the first access, as are the præcordia.

THE fever is irregular in its accessions and remissions ; of no certain type, but increasing towards evening. Most complain of a pain in some part below the head ; most commonly about the nape of the neck and shoulders,

## 74 MEDICAL COMMUNICATIONS.

THE head and stomach are disordered more or less from the beginning ; some have violent headaches, and sickness at the stomach alternately, and often complain of a most acute pain, deep seated in the head, and extending across the forehead, and through the temples ; often crying out in the most affecting manner—*Oh, my head ! Oh, I am sick !*—are restless in the night ; screaming, as if something had hurt them, and squeeze the sides of their head with great violence.

THEY are averse to light,\* and shun it as much as possible : The pupils are a little contracted ; they vomit once or twice in a day : Some bleed at the nose, which affords a temporary relief. One circumstance, almost peculiar to this disease, all without exception are so constive, as to require the most active cathartics, assisted with stimulating glysters to procure stools, which are of a very dark greenish color, with an oiliness, or glassy bile, rather than the natural slime that accompanies worms ; and singularly offensive.

THEY are averse to motion ; lose their appetite ; are thirsty, and swallow with great greediness. Most of the complaints arising from irritation of the  
brain,

\* The contraction of the pupils, and the aversion to light, in the first and beginning of the second stage of the disease, depend upon the inflamed state of the meninges of the brain, which increase the sensibility of the iris.



brain, accompany this disease.\* In the second stage the pulse is slow ; very irregular ; often not exceeding forty in a minute ; the pupils are dilated ; sometimes there is an extreme vigilance ; oftener a somnolency.

DR. Cullen defines it in his nosology, *apoplexia hydrocephalica paulatim adoriens ; infantes et impubes, primum lassitudine, febricula et dolore capitis, dein pulsu tardiore, pupillæ dilatatione ; et somnolentia afficiens* : And subjoins in a note, in opere nosologico, morbos qui sub suo decursu, variam induant formam, rite collocare, ideoque *apoplexiæ hydrocephalicæ locum maxime idoneum assignare, difficile est*. Hunc morbum autem sub *apoplexiæ* potius quam *hydrocephali* titulo ponere vellem : Primo, quia *hydrocephalus*, qui hic subest, nequaquam sensibus evidens est ; dein quia hic morbus symptomatis ab *hydrocephalo* evidente plurimum differt. Denique, quia causa proxima et tandem symptomatis, *apoplexiæ* quam maxime affinis est.

#### METHOD of CURE.

IN the first stage the most active remedies are to be used, such as venæsection at the arm or jugular vein.

\* *Vide*, Whytt on hydroceph. intern. Fothergill and Watson, in London Medical Observations and Inquiries, vol. 4th. Motherby's Medical Dictionary, voce, hydroceph. int. Ree's edition of Chambers' Cyclopædia, voce, hydroceph. intern. Percival, and Dawson, in Duncan's Medical Commentaries ; and Symmons, in ditto.

vein. Apply leeches to the temples, and behind the ears ; scarify and cup the temples ; excite an hemorrhage at the nose ; scarify and cup the nape of the neck ;\* give gentle cathartics, as they operate by revulsion, cool the body, and remove any difficulty in the circulation through the lower belly ; assist their action with stimulating glysters ; keep the body in an erect position, as it lessens the impulse of the blood upon the head, and facilitates the return of the refluent blood ; shave the head, bathe it with æther, as evaporation generates cold by absorbing the heat from the contiguous parts, and will have a tendency to lessen the inflammation of the internal parts ; blister the whole head, and keep up the discharge with the vesicating ointment ; blister the nape of the neck, the temples, and behind the ears ; use warm pediluvia ; give saline draughts and saline diuretics. May not nauseating doses, by lessening the spasm upon the vessels of the brain, easing pain, and diffusing the circulations, be advantageous ?

## PERHAPS

\* Morgagni venarum occipitalium incisionem eximie collaudat ; quia hæ venæ intra cranium cum utroque laterali sinu communicant, eaque propter instituta ipsarum sectione sanguis quem in sinus convectoræ erant, avertitur, atque hinc reliqui sanguinis, qui per eosdem sinus progreditur, copia minuitur aliquantulum, motus autem non sine emolumento augetur. Quia vero harum venarum trunci profundius siti, et non nunquam in plures minores que ramos divisi reperiuntur, cucurbitulas et crebas, aliasque incisiones ante ferendas putat."—*Hofmanni Medic. ratio, System: Tom, IV de hæmorrhagia cerebri.*

## MEDICAL COMMUNICATIONS. 77

PERHAPS some from timidity may be restrained from bleeding such young subjects, to whom this disease is most incident. The great Sydenham\* long since has combated this prejudice, and proved the great utility of venæsection in many diseases of infants.

IN the second stage, nothing has been proposed that I know of, that is adequate to the cure or relief. There is therefore every stimulus to induce physicians to mark with precision the symptoms denoting the disease in the first or inflammatory stage.

MERCURY has been proposed by the very ingenious Percival and Dawson, "and much has been said in favour of exciting a salivation by mercury, at least of using it so as to restore the necessary absorption of the fluids in the ventricles of the brain; but it is objected that when mercury has been useful, the disease has been mistaken, and that it was not the hydrocephalus internus."†

to this observation it may be added, that the disease would probably be increased by mercury, when used to excite a salivation in the first stage, as it would

\* Sydenham *Hist. Morbil. epid. Anno. 1674, et Mead de Morbillis.*

† London Medical Transactions, Vol. II. Edinburgh Medical Comment. Vols. V. VII. VIII. Motherby's Medical Dictionary, voce, hydroceph. int. and Medical Observations and Inquiries, Vol. VI.



78 MEDICAL COMMUNICATIONS.

would, by its irritation, accelerate the fluids in the carotids and vertebral arteries, and therefore increase the inflammation; and is problematical in the second.

IN one case of an adult, in whom the disease was rather chronic, a perpetual blister to the head, and a seton in the nape of the neck, afforded a temporary relief, and protracted life.

IN the year 1783, a gentleman of the faculty observed to me, that he had inspected the head of a child, who died with all the symptoms of the hydrocephalus internus; and that he and another physician were surprised that there was no water in the ventricles of the brain, but that the meninges of the brain were very much inflamed.

THIS observation led me to pay particular attention to this disease; and the next child I saw with it, which was in 1784, I proposed, in a consultation with Dr. Danforth, venæsection; and notwithstanding the disease was in the beginning of the second stage, it afforded great relief from pain, and a truce to the disease; however, the child died.

IN the year 1785, the sister of the last patient was seized with violent pain in the head, deep seated, and extending through the temples, with an impatience of light, sickness at stomach, extreme costiveness, no appetite. Her mother early consulted me,  
and

and observed that this child's complaints were so similar to those of the other daughter, who had died the year before, that she was much alarmed; and therefore asked my advice.

I THOUGHT it was an incipient hydrocephalus internus. I bled her largely at the arm, gave her cooling saline cathartics; haustus salinus; used warm pediluvia, and a strictly antiphlogistic course of medicines and diet, by which she was restored to health.

SINCE I wrote the above, I have seen an inaugural thesis in the thesaurus medicus novus Edensis, by Dr. Quin, de hydrocephalo interno, published 1786. When I read it, I was surprised that Dr. Quin, so long since as 1779, should have hinted, and brought some dissections of subjects who had died of this disease in proof of the hydrocephalus internus, being a consequence of inflammation of the meninges of the brain; and proposed a method of cure, so very different from every author I have seen upon the subject before him: And that no author who had since written upon the subject, that I know of, should have mentioned it.\*

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\* The following detached Essays on this disease have been published since 1779:—Manning's improvements in the modern practice of physic, last edition.—Lee Perkins, vol. I, of second deced Med. Commentaries, 1786.—Motherby's Medical Dictionary, second edition, 1785.—Doctor Ree's edition of Chambers' Cyclopædia, 1786.—Hooper and Lettsom in memoirs of the London Medical Society, vol. I, 1786. None of which take any notice of Quin's thesis.

80 MEDICAL COMMUNICATIONS.

THE monthly review, for November, 1785, observes, that Dr. Withering, on the digitalis, conjectured that the disease arose from inflammation. I have not seen the essay on the digitalis.

A P P E N D I X.—*March, 1790.*

J. H. a miss between four and five years old, of a light complexion, a delicate, irritable habit; was seized 22d January, 1790, with violent pain in the fore part of the head; an incessant vomiting of bile and phlegm. She had been costive some days, and had at times complained of pain in the head and neck, previous to this seizure.

AFTER she had been indisposed three days, as her mother thought she had the symptoms of the measles, she gave her a vomit, which operated kindly; notwithstanding, the sickness, pain in the head, and costiveness continued. The 28th, I first saw her, late in the evening; she was in great distress; incessantly screaming; the muscles of the lower limbs and abdomen were spasmodically affected, and the legs and thighs contracted towards the abdomen: She vomited often, and was delirious; the pulse small, hard, and irregular. Three stimulating glysters were given, which procured large faecal discharges: An antiemetic anodyne draught, suppressed the vomiting, and relieved her of the spasms of the muscles of the abdomen and lower limbs; and  
procured



procured ease, and a better night than she had had for a week. As soon as the sickness was suppressed, she took an ounce of soda phosphorica, and an ounce of manna, dissolved in two tea cups of water, at three doses.

THE 29th, she was sensible, the pulse slow, hard, and irregular, the tongue a little furred in the middle; she said her head ached; pressed the sides of it, and often moaned, *Oh, my head!* through the day. The light was not offensive to her eyes, and the pupils contracted in the usual light of the chamber, and immediately dilated upon excluding it.

As she had been long costive, and the soda phosphorica, &c. had not operated, she took a second dose, and was directed to receive glysters until she had discharges from the bowels. The cathartic gave her two stools, and she vomited once; she seemed to be refreshed by the sleep of last night; she took liquid nourishment greedily. I now suspected there might be a tendency to hydrocephalus internus: Her cheeks were flushed, but the upper lip had that swelling which Dr. Home, in his clinical observations says, constantly accompanies worms in the bowels; but the alæ nasi were in a natural state. I was dubious until I had thoroughly cleansed the primæ viæ, whether the slowness and irregularity of the pulse depended upon the affection of the primæ viæ, worms, or an inflammation of the meninges of

## 82 MEDICAL COMMUNICATIONS.

the brain ; but as the bowels were now discharging good fæces, of rather a lax nature, I now attributed the pains and moanings to the inflammation of the meninges of the brain. I therefore bled her in the arm ; and although the evacuation by the vein was but small, and the complaint in the second stage, it gave her relief. I would have bled her again, but it was impossible to obtain any more blood by venæsection. Unfortunately we have no leeches, at least I never could procure any. She was sensible, and complained much less of the pain in the head than before the bleeding. I would have cupped and scarified the nape of the neck, but was prevented : It was with difficulty I blistered the head, nape of the neck, temples and forehead.

THE 30th, she seemed rather better, took haustus salinus, received a glyster, and had two discharges from the bowels ; but she lay senseless 31st : With difficulty took either nourishment or medicine. The eyes not sensible of the light, and the pupils dilated. The pulse increased in velocity ; was weaker, and more regular.

DR. Danforth saw her with me this day ; and although we had never seen any medicine so efficacious as to afford any permanent relief, in the second stage, nevertheless, as two very eminent physicians in England had recommended mercury so as to affect the system in general, we agreed to give her mercurius dulcis, one gr. every two hours, and

to

to rub into the thighs twenty four grs. ung. merc. fort. every night and morning, till the breath and gums should be affected with this medicine, interposing glysters to keep the *primæ viæ* lax. I had tried this method in two cases before, but never perceived any advantage; I rather supposed it accelerated the fatal catastrophe.

I HAVE before given my opinion upon the use of this mineral in hydrocephalus internus; but as Celsus says, "*satius est enim anceps remedium experiri quam nullum,*" we persisted in its use till the 3d of February, when the glands of the mouth were inflamed, the gums turgid, and the saliva drivelled and wet the pillow on which she lay. She had taken thirty two grains of calomel; but I discovered they had rubbed into the legs and thighs but forty eight grains of the ointment, one third mercury. She discharged a large number of ascariæ with the fæces, which were now very green and fœtid. Notwithstanding the mercury had evidently affected the system, every fatal symptom increased, till death closed the scene early on the morning of the 11th of February.

THE 12th, the head was inspected by Dr. William Jackson, in presence of a young medical gentleman and myself. I shall give the relation in the Doctor's words, as his description agreed with mine. "Upon removing a sufficient portion of



## 84 MEDICAL COMMUNICATIONS.

the bones of the cranium, the brain appeared unusually distended; the dura mater was of a darker colour than natural. Upon opening the longitudinal sinus, its internal surface appeared in an inflamed state. The pia mater was in a state of high inflammation; the blood vessels dispersed in it were double their natural diameters, and surcharged with blood. The falciform and transverse processes were also much inflamed. The corpus callosum was of a greyish colour, and its substance firmer than usual. In the lateral ventricles there were three ounces of a fluid lightly tinged with blood, which did not coagulate in the heat of boiling water; only a small pellicle was formed on its surface. The plexus choroides was of a deep crimson color, much enlarged, and overloaded with blood. The investing membrane of the cerebellum was in the same state of inflammation with that of the cerebrum." To me the plexus choroides appeared a congeries of innumerable blood vessels, very much distended with blood; and in some parts of it nothing but an assemblage of sanguineous vessels totally obliterating the membrane. No comment is necessary upon this appearance of inflammation, as I have in the paper upon the hydrocephalus internus, given my ideas of its cause, &c.\*

### ARTICLE

\* Dr. Danforth would have been present, but a necessary avocation prevented.

A R T I C L E VIII.

*An Account of a preternatural OBSTRUCTION in the VAGINA. Communicated by Dr. JOSEPH OSGOOD, Fellow of the Massachusetts Medical Society, and Physician at Andover, in the County of Essex.*

ANDOVER, MAY, 1786.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

I TAKE the liberty of transmitting to you, a case which happened nine years since.

A. B. being twenty eight years old, became pregnant, and during the time of gestation had no uncommon complaints; at the expiration of nine months, labor came on, the pains were severe, and after continuing forty eight hours, by examination there appeared a membrane at the entrance of the vagina, which extended to the urethra, and when pressed downward by the pains, was three inches in diameter, and impeded the discharge of urine, and occasioned the necessity of the catheter. As this membrane appeared manifestly different from the common membranes, and of an unnatural growth, I made particular inquiry, and was informed, that  
the

## 86 MEDICAL COMMUNICATIONS.

the parts had been accidentally injured when at the age of eleven years. Having acquired this information, and the difficulty being of a singular nature, I called upon Dr. Brickett, of Haverhill, to visit her with me, and from examination he was convinced that the delivery was prevented by this preternatural membrane: Accordingly we divided it, beginning the incision near the perinæum, and extending it to the urethra. The division of the membrane was not attended with any hæmorrhage, though of considerable thickness in the centre, but thinner towards the circumference. The pains continuing after the division of the membrane, she was in a little time delivered of twins, who lived but a short time. After delivery was completed, soft and easy dressings were applied, carefully preventing the membrane from uniting, and in a short time she was entirely well; and has since had four children, without any difficulty.

ARTICLE



A R T I C L E IX.

*Curious Facts respecting WORMS. Communicated by*  
THOMAS WELSH, A. M. *Fellow of the*  
*Massachusetts Medical Society, and Physician at*  
*Boston.*

BOSTON, APRIL, 1789.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

I NOW transmit you certain facts respecting worms, which have occurred to my observation.

IN the month of October, 1775, I was called to H. C. a lad of about twelve years of age, who had previously enjoyed good health; but his appetite was now impaired: He was costive; his pulse were quick, and irregular, attended with uncertain returns of fever, and his skin was dry: His eyes were constantly open; the pupils dilated, with strabismus, and he was *entirely blind*,

THIS last fact I ascertained, by several experiments. I placed various objects in succession before his eyes, and inquired of him, whether he could see either of them? to which he answered in the negative. I held a dollar up, and told him he should

### 33 MEDICAL COMMUNICATIONS.

should have it, if he could discover it ; but he felt for it without success. I darkened the room, and had a lighted candle introduced, which he knew nothing of : I held it near his eyes ; this produced no contraction of the pupils, and he declared that he saw nothing. I then took one of his hands, and told him I would lay it upon something, which he allowed me to do ; I put it into the blaze of the candle ; he instantly twitched it from my hand and the candle, crying out that he was burnt.

EVERY time I approached the house to visit him, I heard him at a distance exclaiming, in the accents of extreme distress—“*Oh, mother ! Oh, my head !*” This he reiterated frequently, during my visits ; and she told me it had been the case for two or three days before I saw him, with very little intermission,

I USED various means to procure a discharge from his bowels, and persisted in them for near three days ; but notwithstanding I effected a plentiful evacuation, no abatement of the tormenting pains of his head, or of the other complaints, was obtained. At length I gave him an emetic, of tart. emet. and attended the operation, which was effected in the usual time ; and upon the first attempt to puke, he brought a large worm out of his stomach ; Instantly his sight returned, as perfectly as he had ever enjoyed it ; his headach vanished, and every other symptom of disease immediately disappeared,

IT is well known that worms often exist in the human body ; and that they remain, for a length of time, harmless inhabitants : But is it not probable, that many of the diseases, which we find difficult to account for, owe their causes to worms ? And is it not to be apprehended, that physicians have taken that to be the *hydrocephalus internus*, which was in fact to be ascribed to *worms* ? especially as calomel, a well known vermifuge, has had the credit of curing that disease.

AND does not the history of the preceding case further confirm the doctrine (which seems, however, to be well established) of the intimate connexion which subsists between the stomach, the first great organ of digestion, and the common sensory ?

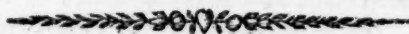
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UPON opening the thorax of a healthy, full grown cat, I found the lungs in a sound state : And on examining the contents of the chest, I perceived (before any incision had been made into the lungs) a live worm, crawling between the convex surface of the lungs and the pleura. This membrane was likewise entire and healthy : The worm measured near nine inches. I then examined the surface of the lungs and pleura more accurately, but could not discover any aperture by which it could have insinuated.

I HAVE



I HAVE often reflected upon this curious appearance of a worm in so singular a situation ; and cannot account for it in any other way, than by supposing that the egg was drawn into the bronchial vessels by the act of inspiration, and transmitted to the extremity of one of them, near the surface of the lungs, and, gradually enlarging, at length burst into the cavity of the chest, where it found sufficient pabulum for its nourishment and increase.



## A R T I C L E X.

*A Case of a CALCULUS in the URETER, together with another of the sudden Growth of the STONE, consequent upon the Introduction of a foreign Body into the BLADDER. Communicated by the Hon. WILLIAM BAYLIES, A. M. A. A. S. Fellow of the Massachusetts Medical Society, and Physician at Dighton.*

DIGHTON, JUNE, 1787.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

CAPTAIN A. of N. on a total suppression of urine, sent for me to use the catheter. Upon examining his abdomen, I found it soft, and not at all distended ;

distended ; and told him there was no need of having recourse to the instrument, as I was confident his bladder was destitute of water. He was in extreme pain, which could be traced from the right kidney along the ureter, until it entered the coats of the bladder. This plainly pointed out, that a calculus impeded the flow of urine through that ureter ; but as he did not complain of his left side, it was still a question, what prevented his bladder being filled with urine from his left kidney ? As many physicians had advanced, that an irritation of one kidney would often produce such a convulsive constriction in the other as to render it unable to separate any urine, I knew not but an opportunity now presented of confirming what I had hitherto doubted. I therefore requested his friends, that, in case of death, they would permit his body to be opened : His death happened in a few days, and his friends consented. His bladder was in a very collapsed state, and not containing a drop of water ; a calculus, about as big as an hazle nut, was wedged into the right ureter at its termination, one third of it being projected into the cavity of the bladder, and the other part being so closely embraced that it required considerable force to disengage it. This ureter, between the bladder and kidney, was dilated sufficient to admit one's little finger. The kidney to which it belonged, was also greatly enlarged. Upon pressing it, the bladder was immediately filled with

92 MEDICAL COMMUNICATIONS.

with urine. Its pelvis contained thirteen small calculi of different sizes. The left kidney was very large, and its surface covered with hydatids of a yellowish color. A foul, urinous, purulent fluid was lodged in the pelvis. I could not find the ureter, though I thought the shrivelled remains of it were discernible ; neither could I discover this kidney to have any connexion with the kidney or ureter on the right side. This person had, for eighteen months or two years, labored under a compound *fistula in ano*, and, long before that, been subject to difficulties in the urinary parts. Is it not probable, the urine might escape through the diseased kidney or ureter into the cavity of the abdomen, and make a lodgement about the lower part of the rectum, which finally occasioned the fistula, though warded off for a while by the power of absorption. A discharge of urine by the anus, after the appearance of the fistula, whenever he attempted a stool, rather confirms it. Had I been more conversant in dissections, this might perhaps have been clearly determined.

C A S E II.

MR. ———, more than fifty years of age, by accident, had two or three inches of the smooth stalk of a plant broken off in his bladder. In a month, he complained of those pains and difficulties commonly attendant on the stone ; in five months he was obliged to submit to the operation, when there

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## MEDICAL COMMUNICATIONS. 93

was taken from him a stone which weighed nine drams. The stalk formed the basis, round which the concrescible matter cohered with considerable force. The parts of the stone, contiguous to the stalk, were very hard; the other parts brittle and sandy.

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### A R T I C L E XI.

*An EXPERIMENT for determining the Expediency of the SIGAULTIAN OPERATION. Communicated by the late JOSEPH ORNE, A. M. A. A. S. Fellow of the Massachusetts Medical Society, and Physician at Salem.*

SALEM, OCTOBER, 1783.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

THE utility of the operation of dividing the symphyfis pubis in a certain species of difficult labors, being still a subject of question, I conceived that every opportunity of determining it by experiment, might be worthy of attention, especially as this operation if brought to the perfection of which some have supposed it susceptible, may be a comparatively gentle substitute to a terrible process, that could be suggested only by the prospect of immediate

## 94 MEDICAL COMMUNICATIONS.

diate death, and never practised but in circumstances bordering on absolute despair.

FORTUNATELY for the most delicate part of our species, the necessity of practising it on the living subject, very rarely occurs ; making the experiment on any dead subject, excepting such as were recently delivered, or in the last stages of pregnancy, can do but little to determine the point ; and we very rarely I suppose have an opportunity of dissecting subjects of this description : In this view of the matter the following history is communicated.

A WOMAN, aged about twenty five, at the end of the 8th month of her second pregnancy, was suddenly seized with convulsions, which in about forty eight or sixty hours, put an end to her life. Just before she died, there were symptoms of labor, and on examination, the os internum was found considerably dilated, the membranes protruded, and the feet presenting. The gentleman who attended her during her illness, having a curiosity to inspect the condition of the gravid uterus, and perhaps suspecting that some local cause of the disease might possibly be discovered, obtained leave to open the body. Dr. Holycke, with myself, attended him on this occasion. On laying open the abdomen, and making as large a wound as was necessary in the uterus, nothing preternatural was discovered, excepting the posture of the fœtus just mentioned ; the parts were therefore presently closed, and as the opportunity  
of

of a few moments presented, it was proposed to cut the symphysis pubis, as the patient died nearly at that time, when we suppose the ossa pubis, if divided, will admit the greatest separation from each other. I accordingly performed the operation with a bistoury, and without any difficulty, as the thighs were previously separated to some distance from each other, and consequently the connecting ligaments of the symphysis in a state of violence. The instant the division was effected, the parts flew asunder nearly two inches, with the violence of a bow suddenly cut in two, when very forcibly bent. By separating the thighs still further, the ends of the bones were made to recede at least  $2\frac{3}{4}$  inches; and I think, if necessary, another  $\frac{1}{4}$  inch might have been obtained, which I presume would have been quite sufficient to remove any such difficulty as might make this operation on a living subject eligible. A small vessel was divided, which might have demanded a ligature; this however could have been easily used. On bringing the knees together, the ends of the bones were again brought into perfect contact. The caution inculcated by Mr. Sigault, not to separate the thighs too far, previous to the operation, seems very necessary, as from the sudden separation of the bones while the knife is pressed down, in the act of dividing it, might forcibly slip through, and do mischief in the vagina.



## A R T I C L E XII.

*An Account of an ANEURISM in the THIGH, perfectly cured by the Operation, and the Use of the Limb preserved. Communicated by THOMAS KAST, A. M. Fellow of the Massachusetts Medical Society, and Physician at Boston.*

BOSTON, FEBRUARY, 1796.

To the MASSACHUSETTS MEDICAL SOCIETY.

GENTLEMEN,

ON the 25th of May, 1786, I was called upon to visit I. T. a lad aged sixteen years, who, while he was cutting with a shoemaker's sharp pointed knife a piece of leather which he held on his thigh, the knife suddenly cut through it, plunged into his thigh, and wounded the artery. I found him fainting under the loss of blood, there being at least two pounds discharged upon the floor. Upon taking off his clothes, and the pressure of a man's hand, which was fortunately made upon the wound from its being first inflicted, I discovered a wound about one inch in length, on the inside of the thigh, seven inches below the groin, out of which the blood was then discharging *per saltum*. I immediately placed him in a horizontal position, stretched out the limb, dressed up the wound with flour  
and

and lint, and applied a tight bandage, which stopped the hæmorrhage. He was then carefully put to bed, kept very still, and put on a low diet. Soon after it was dressed, he complained of the tightness of the bandage, which was loosened a little the next day.

THREE days after, the thigh began to swell, attended with great pain. On the 29th, a pulsation being now plainly to be both seen and felt through the dressings, I concluded it was an aneurism, and requested a consultation; and in one held upon the case, it was determined that the operation for the aneurism was necessary, which was performed in the following manner:

AFTER having secured the crural artery above by the tourniquet, I made an incision upon the tumor, about eight inches in length, down to the artery: Upon removing the coagulated blood, and slackening the tourniquet, the blood immediately gushed out, and discovered the wound in the crural artery. The tourniquet being instantly made tight, I passed a ligature above, and another below the orifice of the wound in the artery, and secured them. Then loosening the tourniquet, and seeing no hæmorrhage, I dressed up the wound in the usual manner, placed him in bed, with the limb upon a pillow, in a relaxed position, and gave him an anodyne.

98 MEDICAL COMMUNICATIONS.

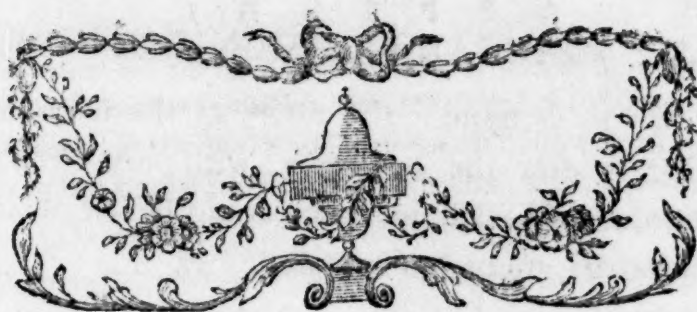
UPON examining the artery at the ankle, immediately after the operation, with very close attention, a very small pulsation could be felt, which afterwards gradually increased.

SOON after the operation, he complained of great coldness and numbness in the leg and foot, which were removed in eight or ten days, by the repeated application of warm spirituous embrocations, frictions, and covering the limb with soft flannel.

NOT the least hæmorrhage appeared from the artery after the operation: The wound digested well; the ligatures were taken away in due time, and the whole was completely healed up in ten weeks, without any material occurrence.

I HAVE the satisfaction of seeing him enjoy the free use of the limb, and able to take any exercise.





## A P P E N D I X.

EXTRACTS *from an* ESSAY *on the* UTERINE  
HÆMORRHAGE, *which precedes the* DELIV-  
ERY *of the* FULL GROWN FŒTUS. *Illus-*  
*trated with* CASES. By EDWARD RIGBY,  
*Member of the Corporation of Surgeons in London.*

NO circumstance that attends parturition, exposes women to so much danger, as profuse hæmorrhages from the uterus, towards the latter end of pregnancy, and in the time of labor ; the art of midwifery is likewise, in no instance, more at a loss in the use of means for the relief of the patient ; an inquiry into the causes of them, and an attempt to improve the practice in such cases, cannot, therefore, be useless.

THE treatment of floodings, that come on before the uterus has acquired any considerable size, must be very obvious, and the consequences of them, at that early period of pregnancy, are seldom to be dreaded, as, if the patient lose blood from the arm, be kept cool, and in an horizontal posture, and such mild, astringent, and anodyne medicines be administered to her, as have been found, by experience, to restrain discharges of blood, they will very frequently stop entirely, and the woman go on to her full time ; and if this should not be the case, but the hæmorrhage should still increase, it will sel-

dom increase to a degree that will endanger the life of the mother, without the small foetus and secundines being separated, and thrown off by it, after which the uterus will soon contract, and thereby closing the mouths of the bleeding vessels, the discharge will gradually diminish, until it be entirely stopped.

BUT floodings that precede the delivery of the full grown foetus, when the uterus is arrived at its greatest stretch, and the vessels have acquired their utmost magnitude, must be ever highly dangerous, being more profuse, and more difficult to suppress, in proportion to the increased size of the vessels; insomuch, that the number of instances in which they have unhappily proved fatal, is very considerable.

TO remove the uncertainty and embarrassment, which have hitherto attended the practice in these cases, and determine on more fixed and rational principles, when it is safe to wait for nature's endeavors to expel the child, and when it is absolutely necessary to bring it away by art, would, therefore, certainly be an important improvement in midwifery.

THE separation of the placenta from the uterus, before the delivery of the child, and the consequent opening of its vessels, must be looked upon as the proximate cause of every considerable discharge of blood from the womb at that time: But this premature separation of it, may be produced by very different causes, and it is a knowledge of this difference that will, in my opinion, remove the difficulty of ascertaining the reason, why the same apparent complaint should, very often, so widely differ in its termination, and at the same time remove also the uncertainty of treating it.

THERE is no particular part of the uterus, to which nature seems constantly and uniformly to fix the placenta, it is, nevertheless, for the most part, so situated, that if the woman be healthy, and no accident befall her, it does not separate until the full term of pregnancy, nor then before the entire expulsion of the child, after which it becomes disengaged from the uterus, and is thrown off, making room for its entire contraction, which shutting up the mouths of the vessels, effectually prevents any considerable loss of blood; for which purpose, it is plain, it must be fixed to some part of the womb, which does not dilate during labor, namely, to the fundus or sides of it.

IN this case, then, when a flooding comes on before the delivery of the child, it is obvious, that the separation of the placenta must be owing to some *accidental* circumstance, to violence done to the uterus by blows or falls, to some peculiar laxity of the uterine vessels from badness of habit or fever, or to the influence of the passions of the mind suddenly excited, such as fear, anger, &c.

BUT from the uncertainty, with which (as before observed) nature fixes the placenta to the uterus, it may happen to be so situated, that when the full term of pregnancy is arrived, and labor begins, a flooding *necessarily* accompanies it, and without the intervention of any of the above *accidental* circumstances; that is, when it is fixed to that part of the womb which always dilates as labor advances, namely, the collum and os uteri, in which case, it is very certain that the placenta cannot, as before described, remain secure until the expulsion of the child, but must, of necessity, be separated from it, in proportion as the uterus opens, and, by that means, an hæmorrhage must *unavoidably* be produced.

THAT floodings, which arise from these two different causes, which I will distinguish by the names of *accidental* and *unavoidable*, though they may appear exactly similar in their first symptoms, should terminate very differently, if left to nature, assisted only by the palliating means, cannot seem strange; nor can it be a doubt that of these two kinds of floodings, only one of them, namely, that which is produced by an *accidental* separation of the placenta, can be relieved by the use of these palliatives; and that the other, in which the placenta is fixed to the os uteri, and the flooding is therefore *unavoidable*, cannot possibly be suppressed by any other method whatever, than the timely removal of the contents of the womb.

THAT this attachment of the placenta to the os uteri, is much oftener a cause of floodings than authors and practitioners are aware of, I am from experience fully satisfied; and so far am I convinced of its frequent occurrence, that I am ready to believe that most, if not all, of those cases which require turning the child, are produced by this unfortunate original situation of it; and, moreover, (which is perhaps of as much practical importance to know) when the placenta is not so situated, the events of the annexed cases authorize me to say, that if the patient be properly managed, nature will, for the  
most



most part, terminate the labor safely, without any manual assistance of the surgeon.

IT may appear extraordinary, that a circumstance, attended with so much danger, and which seems to be so frequent a cause of the uterine hæmorrhage should have hitherto been so little noticed, for though, in the cases which have been mentioned by authors, the placenta was found at the os uteri, yet it was, in very few of them, supposed to have been *originally* fixed there; and I make no doubt but it has often happened when it has not been known at all to the surgeon, as I am induced to believe that in the greatest number of those instances, in which the women have died undelivered, the floodings have been produced by this attachment of it.

ADMITTING, then, that floodings are produced by these two different causes, and that they require a treatment so widely different, we cannot be at a loss when such occur to us, and we have discovered the particular cause from which they arise, how to act; as, in the one case, we shall be encouraged to wait, and make use of such means to restrain the discharge, as will be more particularly mentioned hereafter, and in the other, we shall not hesitate to have recourse to delivery by art.

THE success of turning depending entirely upon its being done before the patient has lost too much blood, it is a matter of the utmost importance to obtain an early knowledge of the necessity there is of doing it, or in other words, to know at the beginning of the discharge, whether it be produced by the placenta being situated on the os uteri or not.

THERE is, perhaps, some difference to be observed in the time and manner that floodings, produced by these different causes, come on; probably, that which is occasioned by the placenta being fixed to the os uteri, will, for the most part, not come on till the full term of parturition, when the uterus begins to dilate from the approach of labor; the other, which is owing to some accidental separation of the placenta, may, on the other hand, come on before labor begins, and indeed at any time during pregnancy. The only certain knowledge respecting the situation of the placenta, is to be derived from an examination of the uterus by the touch.

FOR this purpose, however, the usual method with one finger will not always suffice, but the hand must be introduced into the vagina, and one finger insinuated into the uterus. If the placenta be at the mouth of the uterus, it will be immediately felt by the finger, and may be distinguished from the membranes, by its greater thickness, and from coagula of blood, by the irregularity and roughness of its interior surface, which will then present to the finger.

SUPPOSING, then, that the placenta should, from this inquiry, be found at the mouth of the womb, the surgeon will be at once convinced of the danger that must unavoidably attend delay, from the impossibility there will be of affording the woman relief by any other means than the timely removal of the child, and will, on that account, not hesitate to deliver before too great a loss has been sustained.

IN recommending early delivery, I think it right, however, to express a caution against the premature introduction of the hand, and the too forcible dilatation of the os uteri, before it is sufficiently relaxed by pain or discharge; for it is, undoubtedly, very certain, that the turning may be performed too soon as well as too late, and that the consequences of the one may be as destructive to the patient as the other. I am particularly led to observe this, as I have lately been informed, from very good authority, (namely, a gentleman to whom one of the cases occurred) of three unhappy instances of an error of this sort, which happened, some years ago, to three surgeons of established reputation, who, from the success they had met with in delivering several who were reduced to the last extremity, were encouraged to attempt it where but very little blood had been lost, in hopes that their patient's constitutions would suffer less injury, and their recovery be more speedy; which, till the experiment was made, was a very reasonable supposition; the women died; and they seemed convinced that their deaths were owing to the violence of being delivered too soon, and not to the loss of blood, or any other cause.

IT becomes, then, necessary to endeavor to ascertain, with a degree of accuracy, the precise time when we may proceed to deliver, without fear of incurring the ill effects either of precipitancy or delay.

TO steer safely between the two dangerous extremes, it appears necessary that, on the one hand, we should never deliver till the dilatation of the womb can be effected by easy means, and, on the other hand, when it has been sufficiently relaxed by discharge, if the woman have suffered much by it, that we should no longer defer it, notwithstanding, from the absence or inefficacy of pain, the os uteri should remain unopened: Yet, after all, as turning seems to be only necessary when the placenta is fixed to the mouth of the womb, and that circumstance can seldom be known till the hand be introduced into the vagina, and one finger be insinuated into the uterus, I should imagine it not very likely that we should often be in danger of injuring the patient by premature delivery, as when the hand passes easily into the vagina, I should suppose there will be seldom much difficulty in its admission into the uterus.

IN introducing the hand for the purpose of turning, when the os uteri has been carefully dilated, if the separated part of the placenta be immediately presenting, it is best to endeavor to pass the finger through the substance of it, and by degrees with other fingers to enlarge the opening, till the hand can get through it into the cavity of the uterus: The obvious reason for this is, that by this means not more of the placenta may be separated, than is necessary for the introduction of the hand, and consequently that as little increase of bleeding as possible may be produced by the operation; but if it be impracticable, as I have more than once found it, and it must ever be when the middle of the placenta presents to the hand, from the thickness of it near the funis, it must be carefully separated from the uterus on one side, and the hand passed till it gets to the membranes, which being easily broken, it is admitted into the bag, the floating foetus is turned, and the delivery finished, as in preternatural positions of the child; except, that in this case the extraction should be more slow, that the uterus may not be unable to contract, by being too suddenly emptied: A moderate pressure from the hand of an assistant, upon the abdomen, as the child is coming away, will likewise be of use to assist the contraction. The placenta being at the os uteri, and being usually separated more by the introduction of the hand, commonly comes away immediately, but if a part of it should remain adhering, and the discharge continue, it should be carefully removed, and as it is so near, it may very easily be done.



IF, on the contrary, it be clear from this careful examination of the uterus, that the placenta is not at the mouth of it, and that the coming on, or increase of labor, will not of necessity increase the discharge, provided it be not very profuse, (for let it be remembered, that I am supposing the examination to be made early, and before any considerable quantity of blood has been lost) it certainly will be proper to wait for the natural pains, and, in the mean time, to use such methods as are likely to restrain the flooding, which are, the admitting a free circulation of cool air into the room, keeping the patient in an horizontal posture, giving her anodyne, with tinctur. rosar. &c. and supplying her frequently with such cool and simple nutritious drinks as will support her without quickening the circulation; from pursuing this method, it will often happen, that the discharge goes off entirely, and if the woman be not arrived at her full term, and she be kept very still and calm, that it does not return before labor comes on. But if it should still continue, or return frequently, it will be right, if possible, to bring the uterus into a state of contraction, by exciting some pain, which may often be done by gently irritating the os uteri with the finger; if this succeed, and the mouth of the uterus be thereby so far dilated, that the distended membranes may be felt, they must be immediately pierced by passing a probe along the finger, as upon the discharge of water thus produced, the womb necessarily contracts to a certain degree, and the flooding proportionably abates; this is, for the most part, soon succeeded by slight pains, which if the child present fair, have very soon an effect upon it, and push it down.

BUT if, notwithstanding, this mode of treatment, the discharge should not lessen, if the evacuating the waters should not abate it, and if, moreover, labor pains, sufficient for expelling the child, should not succeed, and the flooding should still increase, so as to endanger the life of the patient, I should imagine it hardly necessary to say, that even in this case, as well as when the placenta is fixed to the os uteri, the only certain method of stopping it should be used, namely, the delivery of the child by turning; for though I have never yet met with a case that under such circumstances has required it, and believe such very rarely happens, yet I would not be supposed to say such an one cannot occur, as the separation of the placenta may, for instance, be produced by such violence done to the abdomen,

abdomen, and the hæmorrhage may be so profuse, that nothing but a speedy delivery by art will put a stop to it.

TO many practitioners, the introduction of the hand to turn the child, is a very disagreeable operation, and if they have not been much used to it in cases where the uterus is but little open, it appears a very difficult and formidable one: It were to be wished, that even this circumstance had never an improper influence upon surgeons, especially those who are young in practice, and that they were never induced to omit, or too long delay this operation, because they feel unwilling to do it.

BUT it is not so difficult as many imagine, for even in preternatural cases, where the uterus is strong and rigid, and gives way reluctantly, if the hand be slowly and gradually introduced, it will seldom be found impracticable, provided the pelvis be not badly formed; and in floodings it is effected with peculiar ease, which should be a further encouragement to attempt it in such cases; for as the uterus necessarily becomes so relaxed after a considerable loss of blood, it very readily gives way to the admission of the hand, that tight contraction of its neck, which in other cases is such an impediment to the introduction of it, being here seldom to be met with; and it may be added, that in proportion as nature, from the loss she has sustained, is less able to bear violence, happily, a proportionable less force is requisite.

THUS, I have ventured to place one of the most important subjects in midwifery in a new light, and have endeavored to establish a hitherto uncertain practice upon principles that are more fixed and constant, by ascertaining when we may, with propriety, leave nature to do her own work, and when it will be requisite to proceed to immediate delivery, by turning the fœtus: I have also endeavored to fix the precise time, when it may, with most safety, be done; and, in order to promote the practice of turning, when such becomes necessary for the woman's safety, have attempted to obviate the objections which have been made to this operation, from a supposition of its being either difficult, dangerous, or useless. And, from what has been said, it appears, that the placenta is fixed to the os uteri much more frequently than has hitherto been supposed; that when it is so situated, nothing but turning the child will put a stop to the flooding;  
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ing ; that when it is not so situated, nature will, for the most part, expel it safely herself ; that an early knowledge of this circumstance is of the utmost importance ; that it may be obtained with ease and safety ; and that therefore it should, in every case, be inquired into before much blood has been lost ; that the information, procured by making such an inquiry, should govern our management of the case ; if we find the placenta at the mouth of the womb, that we should proceed to delivery ; that, if it be not so situated, if the discharge be not very profuse, and a very large quantity of blood have not been already lost, we should endeavor to restrain it by the means commonly directed for that purpose, and wait for nature's assistance in the expulsion of the child : And it is thence evident, that this practice will have an advantage over the uncertain one hitherto adopted, because our determination about what we do, will ever be more safe and satisfactory ; for if, on the one hand, we wait, we shall have the satisfaction of knowing that, in all probability, nature will be able to expel the foetus ; and if, on the other hand, we immediately turn the child, we shall, also, have the satisfaction of knowing that nothing but turning can relieve the woman, and that, therefore, we do not give her unnecessary pain : And finally, that our doing it before the patient has sustained too great a loss of blood, will make the chance of success more probable, and thereby be the means of preventing, in some measure, the fatality which has hitherto so frequently attended these cases, and which has, perhaps, been more owing to a rational method of treatment not being known, than is commonly imagined.

## C A S E I.

DECEMBER 29, 1769, I was sent for, in the afternoon, to the wife of ——— *Balls*. She was at the latter end of the eighth month of pregnancy, and had been seized the preceding evening, with a discharge of blood from the uterus ; it began without pain, and in small quantity, but increased by degrees, and was considerable when I saw her ; she had now, however, small pains, by which the os uteri was already somewhat dilated. I admitted as much cold air as I could into the room, supplied her frequently with cool and nourishing drinks, and as the pains still continued, waited until the membranes were so far distended and pushed down, that I could scratch them



them with my nail, by which means I broke them, and let the water escape; the discharge immediately lessened, the pains increased, and, in a little while, I felt one foot of the foetus presenting; I brought it down, and with great ease, drew forth a small dead child. The placenta came away in about a quarter of an hour, the flooding became less and less, and the poor woman, though much reduced by the loss she had sustained, recovered in the usual time.

## C A S E II.

FEBRUARY 6, 1770, — *Stannard*. She was a small delicate woman, of a sickly relaxed habit, and had born several children. About the end of the eighth month, a flooding came on, without any previous pain, or symptoms of labor. I saw her in the evening, after the discharge had been several hours, though as yet it had not been very profuse; she was, however, very faint and languid: By keeping her upon the bed with but few clothes upon it, and admitting cool air into the room, it evidently lessened: I found the os tincae relaxed, and a little opened; after examining several times, (and, probably by the slight irritation, occasioned by the frequent touch) it opened somewhat more, and the membranes protruded so far, as to be felt by my finger: I immediately broke them, the discharge abated still more, and some slight pains succeeding, she was, in about half an hour after the breaking of them, delivered, with remarkable ease, of a small living child; the placenta was removed without trouble, the discharge was moderate, stopped at its proper time, and the woman perfectly recovered.

## C A S E IV.

IN the evening of August 12, 1772, I was sent for to the wife of — *Leman*, a pauper, belonging to the town; she had a midwife with her, who informed me her patient had been flooding in some degree during the day, and that it had, in the last hour, very much increased. I examined, found the discharge considerable, the uterus was scarce at all open, and she was without pain; she was, moreover, extremely faint, and seemed to have suffered much more than any of the former patients: Admitting cool air into the room, &c. as in the other cases, for a while abated the discharge; but as it returned very soon, and the woman seemed in the most immediate danger,

danger, I was very desirous of attempting to relieve her by turning the child ; but judging it right to have the opinion of another surgeon, I sent for one who has had considerable practice in this city. He seemed to think my patient too far gone to receive relief from any attempt whatever to stop the flooding ; and as he added, that it was his opinion, she would sink during the operation, as one or two had before done on whom he had made the like attempt, he advised me not to turn the child. His advice prevented my doing it immediately, though before his arrival it was my design to attempt it, if he justified it : I was determined, however, not to leave the bed side, that if there came on the least degree of pain, so as to allow me to feel the membranes, I might, as I had before done, pierce them with a probe, or if the flooding increased, and I found it practicable to introduce my hand, I still resolved to attempt the removal of the child.

BY carefully attending to keep the room very cool, by preventing my patient from being the least stirred, and being myself her nurse, in giving here very few minutes small quantities of the coolest drinks, I prevented the discharge from increasing, and at the same time supplied, as far as I could, the waste of what she did lose, by the drinks she took, being as nutritious as I could venture to give them, without their being irritating : After attending her in this manner about two hours, frequently examining and gently stimulating the os internum, there came on at length a slight pain, and soon after, I could just feel the membranes with the end of my finger ; I immediately introduced a probe, in the manner I had before done, and broke them ; it had the same good effect as before, for the discharge immediately stopped, and pain coming on, the uterus opened, the head of the child was pushed down, and, notwithstanding the very alarming state she had, but just before been in, she was soon easily, and safely delivered, by the natural pains, of a dead child.

## C A S E VI.

DECEMBER 1, 1772, about midnight, I was sent for to ———  
*Welden*, another pauper. She had a midwife with her, who informed me, the woman had been flooding a considerable time, and had lost a large quantity of blood, which seemed to be true, from the  
 state

state the poor creature was in ; for her faintness was extreme, and she had every symptom of the most immediate danger.

UPON examination, I found the os uteri more dilated than in any of the former cases, and the placenta evidently presenting : As no possible relief could, in this case, be expected from waiting, I at once resolved to give her the chance of an immediate delivery ; which I effected by introducing my hand into the uterus, turning and bringing away the fœtus ; and this I did with much greater ease than I could have imagined, as the resistance from the uterus was very trifling ; I endeavored to pass my hand through the substance of the placenta, but not being able to do it, I separated it on one side, until there was room for my hand to pass.

THE woman remained very faint and weak a long time after delivery, but being carefully nursed, she recovered by degrees, and was able to go out before the end of the month. This was likewise a dead child.

#### C A S E VII.

DECEMBER 29, 1772, about six o'clock in the morning, I was called to ——— *Freeman*, a poor woman, who was under the care of a midwife ; she had been flooding many hours, and had lost an immoderate quantity of blood, was greatly sunk, and appeared to be almost dying. On examination, I found the mouth of the uterus as open as in the last case, and the placenta situated in like manner, which determined me to pursue the same method I had so successfully used in that.

THE pelvis was narrow and distorted, but I introduced my hand into the uterus, and turned the child with all desirable ease ; the feet, body, and arms of the fœtus I brought down in the usual manner, and with no more than usual difficulty ; but when I came to the head, it remained so fast betwixt the bones of the pelvis, that though I got one of my fingers into the mouth, (the face being towards the sacrum) and pulled the body, at the same time, with considerable force, I could not move it in the least degree, inasmuch that the vertebræ of the neck began to give way ; which made me desist from pulling so forcibly, and induced me to send for the assistance of another surgeon.

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HE made several similar but unsuccessful attempts ; we therefore concluded, that nothing but lessening the size of the head, by evacuating the brain, would allow it to pass ; but to effect this was no easy matter ; he thought it possible to pass the scissars through the os palati into the head, and attempted it ; when the scissars had pierced the bones, I endeavored to enlarge the opening, but could not do it ; in tracing with my finger round the head, as far as I was able, I thought there was a possibility of pushing in some curved instrument behind the ear, at the lower end of the temporal bone ; but the scissars being strait, I could not use them ; however, from the looseness of the scalp, (for it ought to be observed, that the child was dead, and almost putrid, which was certainly the reason why the vertebræ of the neck separated so easily, when I attempted to pull the head) I thought I could push in the curved end of a blunt hook, which, with a good deal of difficulty, I effected, and by degrees insinuated it under the temporal bone ; the opening I easily enlarged by my finger, and with one blade of the forceps, so that at length some of the brain came away, the head was thereby compressed into a smaller compass, and she was delivered : But the extreme fatigue she had undergone by this unlucky difficulty, joined to the immoderate loss of blood she had previously sustained, was more than she was able to support, and she died the following morning.

SINCE the above case happened, I have procured a pair of scissars curved at the points, (somewhat like tonsil scissars) which may easily be used where it is found necessary to open the head, after delivering the rest of the child.

## C A S E X.

FEBRUARY 12, 1773, I was sent for to — *Marshall*, a poor woman in the workhouse, who was in her last month of pregnancy, and had been flooding about two hours ; she had, in that time, lost a very great quantity of blood, and was so much sunk by it, that she died soon after I came into the room.

I HAD an opportunity of opening the body, the following morning : The membranes adhered universally to the uterus, by the spongy chorion ; I carefully measured the water contained in the bag, and there were three pints of it : The child laid, with the head  
obliquely

obliquely to the right side of the fundus uteri, and the face towards the spine; the hands were turned upon the face, holding each one of the feet, so that the podex would have presented; the placenta was situated upon the os uteri, and a partial separation of it, not bigger than a crown piece, was the cause of this fatal hæmorrhage. Before she died, I examined with my finger, found the uterus very little open, and did not feel the placenta.

## R E M A R K.

THIS case proves, that the os uteri sometimes does not at all dilate to the size that has been usually thought necessary for safe delivery, and that it is not, therefore, always right to defer turning the child, in expectation of it: Had I been with the woman sooner, I certainly should have attempted it; and as from the first, there had been a considerable discharge, in all probability the uterus was so relaxed, that it might have been easily and safely effected.

## C A S E XIII.

JUNE 27, 1773, — *Playford*. She was attended by a midwife, at the time I was sent for, and had been flooding very much several hours; the discharge was still profuse, the os uteri quite shut, and from the faintness she was in, she was altogether without pain, though the complaint came on with labor pains: She had the most threatening appearance, and I very much feared I could be of no service to her, and intimated it to the midwife and the assistants, but added, that if there were any possible chance, it must be from immediately delivering her.

As they were desirous of another surgeon's opinion, I sent for a gentleman, who confirmed what I had said respecting the danger the woman was in, and agreed with me, that the only chance she could have must be from a speedy delivery; the practicability of which, however, he rather doubted, as the os tinctæ was so little open: I apprehended great difficulty in doing it, and feared likewise, that if I succeeded in bringing away the child, the woman would hardly survive the loss she had sustained; but having succeeded before, much beyond my expectation, I thought it right to attempt it: I introduced my hand into the vagina, for this purpose, and first one, then more fingers, into the uterus, when (and not before) I found the

the placenta fixed to the os uteri; I endeavored to pass my finger through the substance of it, but was not able, though I tried some time; I therefore separated it on one side, and got my hand completely into the uterus; the head of the child presented, but I soon got hold of the feet, brought them down, and delivered with the same ease as in the last case of turning: The woman remained very languid a long while, and seemed hardly alive for many hours; but by supplying her frequently with cool and nutritious drinks, and carefully managing her in other respects, she recovered entirely.

## R E M A R K.

THIS case appears much to have resembled that of *Marshall*, who died undelivered; as the discharge was very profuse, and the uterus very little open, the difference in the event being produced merely by my being fortunately called sooner to this woman. The ease with which the turning was effected, and the success which attended it, confirm the remark made to that case, that it is *sometimes* justifiable to deliver where the os uteri is not dilated to the size of a shilling, or a half crown.

## C A S E XXII.

DECEMBER 16, 1774, ——— *Smith*, a healthy, strong young woman, in the last month of pregnancy, sent for me in the evening, having had, for several hours, a discharge of blood from the uterus. I immediately introduced my hand into the vagina, and with one finger in the os uteri, which was soft and yielding, I imagined I found the placenta; but, upon further examination, was satisfied that it was nothing more than a coagulum of blood, as I very evidently felt the membranes, with the head of the child behind them. The dilatation produced by this examination, was sufficient to have rendered the introduction of the hand into the uterus, to turn the foetus, if it had been necessary, very practicable; but being confident of the great probability, not to say certainty, there was of nature's being able to expel the child in due time, I thought it right to endeavor to restrain the present discharge, and wait for pain. This was soon effected, by the usual means, and there seemed a probability of her going to her full time, if kept still and cool, for it stopped entirely for two days.



IT returned, however, on the third day from the first attack, when it was probably occasioned by some imprudent exercise in the woman, as she had not yet gone her full time; but being now accompanied with pains, the uterus opened, the child was pushed down and expelled with remarkable ease. The hæmorrhage, in this case, rather increased after the delivery of the child, and did not abate until the placenta was removed, which did not descend so soon as it usually does.

## C A S E XXIV.

JUNE 19, 1775, I was sent for to ——— Hoole, a poor woman, under the care of a midwife: She had been flooding several hours, and, in the last half hour, the discharge had considerably increased. I immediately examined *with my hand in the vagina* (for with the finger only I could but just touch the outside of the os uteri) and found, by introducing one finger into the uterus, that the placenta was at the mouth of it: She had lost a considerable quantity of blood, and was very faint, but did not appear to have suffered so much as to have induced me, had the placenta not been there, or had I made no inquiry to find it, to have turned the child; but being convinced of the danger of delay, I determined to deliver; and previous to my doing it, sent for a surgeon who had been before with me in some of the foregoing cases.

WHEN he came, I told him the woman's situation, and desired him to examine in the common way, with one finger only, which he did, but could find nothing unusual at the mouth of the womb; I then desired him to introduce his hand, as I had done; he did this, and immediately discovered the placenta; he, therefore, agreed with me in the propriety of immediate delivery.

I INTRODUCED my hand into the uterus, and found the child lying in the natural posture; I passed the head, and with tolerable ease got hold of the feet, brought them down, and extracted a dead child.

THE woman remained extremely languid for some time after delivery; but, notwithstanding this, and that she labored under every disadvantage produced by extreme poverty, and a remarkable ignorance in her assistants, having neither pure air, clean linen, and hardly common nutriment for several hours, yet she perfectly recovered.

[WE

[WE are indebted for the three following Extracts\* to our ingenious countryman; the celebrated Dr. BENJAMIN RUSH, Professor of Chymistry at the University of Pennsylvania, and Honorary Member of the Massachusetts Medical Society.]

*An Account of the DISORDER occasioned by drinking COLD WATER in warm Weather, and the Method of curing it.*

FEW summers elapse in Philadelphia, in which there are not instances of many persons being affected by drinking cold water. In some seasons four or five persons have died suddenly from this cause in one day.

THIS mortality falls chiefly upon the laboring part of the community, who seek to allay their thirst by drinking the water from the pumps in the streets, and who are too impatient or too ignorant to use the necessary precautions for preventing its morbid or deadly effects upon them. These accidents seldom happen, except when the  $\vartheta$  rises above  $85^{\circ}$  in Fahrenheit's thermometer.

THREE circumstances generally concur to produce disease or death from drinking cold water.—1. The patient is extremely warm.—2. The water is extremely cold.—And 3. A large quantity of it is suddenly taken into the body. The danger from drinking the cold water is always in proportion to the degrees of combination which occur in the three circumstances that have been mentioned.

THE following symptoms generally follow, where cold water has been taken, under the above circumstances, into the body.

IN a few minutes after the patient has swallowed the water, he is affected by a dimness of sight; he staggers in attempting to walk, and unless supported, falls to the ground; he breathes with difficulty; a rattling is heard in his throat; his nostrils and cheeks expand and contract in every act of respiration; his face appears suffused with blood, and of a livid color; his extremities become cold,  
and

\* *Vide* Medical Inquiries and Observations. By Benjamin Rush, M. D. Professor of Chymistry in the University of Pennsylvania. 8vo.—*London*. 1789.

and his pulse imperceptible ; and unless relief is speedily obtained, the disorder terminates in death in four or five minutes.

THIS description includes only the less common cases of the effects of drinking a *large* quantity of *cold* water, when the body is *preternaturally* heated. More frequently, patients are seized with acute spasm in the breast and stomach. These spasms are so painful as to produce syncope, and even asphyxia. They are sometimes of the tonic but more frequently of the clonic kind. In the intervals of the spasms the patient appears to be perfectly well. The intervals between each spasm become longer or shorter, according as the disease tends to life or death.

IT may not be improper to take notice that punch, beer, and even toddy, when drank under the same circumstances as cold water, have all been known to produce the same morbid and fatal effects.

I KNOW of but one certain remedy for this disease, and that is *liquid laudanum*. The doses of it as in other cases of spasm, should be proportioned to the violence of the disease. From a tea spoonful to near a table spoonful have been given in some instances, before relief has been obtained. Where the powers of life appear to be suddenly suspended, the same remedies should be used, which have been so successfully employed in recovering persons supposed to be dead from drowning.

CARE should be taken in every case of disease, or apparent death, from drinking cold water, to prevent the patient's suffering from being surrounded, or even attended by too many people.

PERSONS who have been recovered from the immediate danger which attends this disease, are sometimes affected after it, by inflammations and obstructions in the breast or liver. These generally yield to the usual remedies which are administered in those complaints, when they arise from other causes.

IF neither the voice of reason, nor the fatal examples of those who have perished from this cause, are sufficient to produce restraint in drinking a large quantity of *cold* liquors, when the body is *preternaturally* heated, then let me advise to



1. GRASP the vessel out of which you are about to drink, for a minute or longer with both your hands. This will abstract a portion of heat from the body, and impart it at the same time to the cold liquor, provided the vessel is made of metal, glass, or earth; for heat follows the same laws in many instances, in passing through bodies with regard to its relative velocity, which we observe to take place in electricity.

2. IF you are not furnished with a cup, and are obliged to drink by bringing your mouth in contact with the stream which issues from a pump or a spring, always wash your hands and face previously to your drinking, with a little of the cold water. By receiving the shock of the water first upon those parts of the body, a portion of its heat is conveyed away, and the vital parts are thereby defended from the action of the cold.

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*An Account of the external Use of ARSENIC in the  
Cure of CANCERS.*

A FEW years ago a certain Dr. Hugh Martin, a surgeon of one of the Pennsylvania regiments stationed at Pittsburg, during the latter part of the late war, came to this city, and advertised to cure cancers with a medicine which he said he had discovered in the woods, in the neighbourhood of the garrison. As Dr. Martin had once been my pupil, I took the liberty of waiting upon him, and asked him some questions respecting his discovery. His answers were calculated to make me believe, that his medicine was of a vegetable nature, and that it was originally an Indian remedy. He shewed me some of the medicine, which appeared to be the powder of a well dried root of some kind. Anxious to see the success of this medicine in cancerous sores, I prevailed upon the doctor to admit me to see him apply it in two or three cases. I observed in some instances, he applied a powder to the parts affected, and in others only touched them with a feather dipped in a liquid which had a white sediment, and which he made me believe was the vegetable root diffused in water. It gave me great pleasure to witness the efficacy of the doctor's applications. In several cancerous ulcers  
the

the cures he performed were complete. Where the cancers were much connected with the lymphatic system, or accompanied with a scrophulous habit of body, his medicine always failed, and, in some instances, did evident mischief.

ANXIOUS to discover a medicine that promised relief in even a few cases of cancers, and supposing that all the caustic vegetables were nearly alike, I applied the phytolacca or poke root, the stramonium, the arum, and one or two others, to foul ulcers, in hopes of seeing the same effects from them which I had seen from Dr. Martin's powder; but in these I was disappointed. They gave some pain, but performed no cures. At length I was furnished by a gentleman from Pittsburg with a powder which I had no doubt, from a variety of circumstances, was of the same kind as that used by Dr. Martin. I applied it to a fungous ulcer, but without producing the degrees of pain, inflammation, or discharge, which I had been accustomed to see from the application of Dr. Martin's powder. After this, I should have suspected that the powder was not a *simple* root, had not the doctor continued upon all occasions to assure me, that it was wholly a vegetable preparation.

IN the beginning of the year 1784, the doctor died, and it was generally believed that his medicine had died with him. A few weeks after his death I procured, from one of his administrators, a few ounces of the doctor's powder, partly with a view of applying it to a cancerous sore which then offered, and partly with a view of examining it more minutely than I had been able to do during the doctor's life. Upon throwing the powder, which was of a brown color, upon a piece of white paper, I perceived distinctly a number of white particles scattered through it. I suspected at first that they were corrosive sublimate, but the usual tests of that metallic salt soon convinced me that I was mistaken. Recollecting that arsenic was the basis of most of the celebrated cancer powders that have been used in the world, I had recourse to the tests for detecting it. Upon sprinkling a small quantity of the powder upon some coals of fire, it emitted the garlic smell so perceptibly as to be known by several persons whom I called into the room where I made the experiment, and who knew nothing of the object of my inquiries. After this, with some difficulty, I picked out about three or four  
grains

grains of the white powder, and bound them between two pieces of copper, which I threw into the fire. After the copper pieces became red hot, I took them out of the fire, and when they had cooled, discovered an evident whiteness imparted to both of them. One of the pieces afterwards looked like dull silver. These two tests have generally been thought sufficient to distinguish the presence of arsenic in any bodies; but I made use of a third, which has lately been communicated to the world by Mr. Bergman, and which is supposed to be in *all cases* infallible.

I INFUSED a small quantity of the powder in a solution of a vegetable alkali in water for a few hours, and then poured it upon a solution of blue vitriol in water. The color of the vitriol was immediately changed to a beautiful green, and afterwards precipitated.

I SHALL close this paper with a few remarks upon this powder, and upon the cure of cancers and foul ulcers of all kinds.

1. THE use of caustics in cancers and foul ulcers is very ancient, and universal. But I believe *arsenic* to be the most efficacious of any that has ever been used. It is the basis of Plunket's and probably of Guy's well known cancer powders. The great art of applying it successfully, is to dilute and mix it in such a manner as to mitigate the violence of its action. Dr. Martin's composition was happily calculated for this purpose. It gave less pain than the common or lunar caustic. It excited a moderate inflammation, which separated the morbid from the sound parts, and promoted a plentiful afflux of humors to the sore during its application. It seldom produced an eschar; hence it insinuated itself into the deepest recesses of the cancers, and frequently separated those fibres in an unbroken state which are generally called the roots of the cancer. Upon this account, I think, in an ulcerated cancer it is to be preferred to the knife. It has no action upon the sound skin. This Dr. Hall proved by confining a small quantity of it upon his arm for many hours. In those cases where Dr. Martin used it to extract cancerous or schirrhous tumors that were not ulcerated, I have reason to believe that he always broke the skin with Spanish flies.

2. THE arsenic used by the doctor was the pure white arsenic. I should suppose from the examination I made of the powder with the  
eye,



eye, that the proportion of arsenic to the vegetable powder, could not be more than  $\frac{1}{40}$  part of the whole compound. I have reason to think that the doctor employed different vegetable substances at different times. The vegetable matter with which the arsenic was combined in the powder which I used in my experiments, was probably nothing more than the powder of the root and berries of the *solanum lethale*, or deadly nightshade. As the principal, and perhaps the only design of the vegetable addition was to blunt the activity of the arsenic, I should suppose that the same proportion of common wheat flour as the doctor used of his caustic vegetables, would answer nearly the same purpose. In those cases where the doctor applied a feather dipped in a liquid to the sore of his patient, I have no doubt but his vial contained nothing but a weak solution of arsenic in water. This is no new method of applying arsenic to foul ulcers. Dr. Way, of Wilmington, has spoken in the highest terms to me of a wash for foulnesses on the skin, as well as old ulcers, prepared by boiling an ounce of white arsenic in two quarts of water to three pints, and applying it once or twice a day.

3. I MENTIONED, formerly, that Dr. Martin was often unsuccessful in the application of his powder. This was occasioned by his using it indiscriminately in *all* cases. In scirrhus and cancerous tumors, the knife should always be preferred to the caustic. In cancerous ulcers attended with a scrophulous or a bad habit of body, such particularly as have their seat in the neck, in the breasts of females, and in the axillary glands, it can only protract the patient's misery. Most of the cancerous sores cured by Dr. Martin were seated on the nose, or cheeks, or upon the surface or extremities of the body. It remains yet to discover a cure for cancers that taint the fluids, or infect the whole lymphatic system. This cure I apprehend must be sought for in diet, or in the long use of some internal medicine.

TO pronounce a disease incurable, is often to render it so. The intermitting fever, if left to itself, would probably prove frequently, and perhaps more speedily fatal than cancers. And as cancerous tumors and sores are often neglected, or treated improperly by injudicious people, from an apprehension that they are incurable, (to which the frequent advice of physicians "to let them alone," has

no doubt contributed) perhaps the introduction of arsenic into regular practice as a remedy for cancers, may invite to a more early application to physicians, and thereby prevent the deplorable cases that have been mentioned, which are often rendered so by delay or unskilful management.

4. IT is not in cancerous sores only that Dr. Martin's powder has been found to do service. In sores of all kinds, and from a variety of causes, where they have been attended with fungous flesh or callos edges, I have used the doctor's powder with advantage.

I FLATTER myself that I shall be excused in giving this detail of a *quack* medicine, when we reflect that it was from the inventions and temerity of quacks, that physicians have derived some of their most active and most useful medicines.

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*An Account of the Efficacy of common SALT, in the cure of HÆMOPTYSIS.*

FROM the present established opinions and practice respecting the cause and cure of *hæmoptysis*, the last medicine that would recur to a regular bred physician for the cure of it, is *common salt*; and yet I have seen and heard of a great number of cases, in which it has been administered with success.

THE mode of giving it, is to pour down from a tea, to a table spoonful of clean fine salt as soon as possible after the hæmorrhage begins from the lungs. This quantity generally stops it; but the dose must be repeated daily for three or four days, to prevent a return of the disorder. If the bleeding continues, the salt must be continued until it is checked, but in larger doses. I have heard of several instances in which two table spoonfuls were taken at one time for several days.

IT sometimes excites a sickness at the stomach, and never fails to produce a burning sensation in the throat in its passage into the stomach, and considerable thirst afterwards. I have found this remedy to succeed equally well in hæmorrhages, whether they were active or passive, or whether they occurred in young or in old people.

I HAD

I HAD prescribed it for several years before I could satisfy myself with a theory, to account for its extraordinary action upon the human body. My inquiries led me to attend more particularly to the following facts :

1. THOSE persons who have been early instructed in vocal music, and who use their vocal organs moderately through life, are seldom affected by an hæmorrhage from the lungs.

2. LAWYERS, players, public cryers, and city watchmen, all of whom exercise their lungs either by long or loud speaking, are less affected by this disorder, than persons of other occupations.

I ACKNOWLEDGE I cannot extend this observation to the public teachers of religion. I have known several instances of their being affected by hæmoptysis ; but never but one in which the disorder came on in the pulpit, and that was in a person who had been recently cured of it. The causes which I have seen, have generally been brought on by catarrhs.

TO this disorder, the practice of some of our American preachers disposes them in a peculiar manner ; for it is very common with this class of them, to expose themselves to the cold or evening air immediately after taking what a celebrated and eloquent preacher used to call a *pulpit sweat*.

3. THIS hæmorrhage chiefly occurs in debilitated habits, or in persons afflicted by such a disposition to consumption, as indicates a weak and relaxed state of the lungs.

4. IT generally occurs when the lungs are in a passive state, as in sitting, walking, and more frequently in lying. Many of the cases that I have known, have occurred during sleep in the middle of the night.

FROM these facts, is it not probable that the common salt, by acting primarily, and with great force upon the throat, extends its stimulus to the bleeding vessel, and by giving it a tone, checks the further effusion of blood ?

I SHALL only add to this conjecture the following observations :

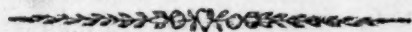
1. I HAVE



1. I HAVE never known the common salt perform a cure, where the hæmorrhage from the lungs has been a symptom of a consumption. But even in this case it gives a certain temporary relief.

2. THE exhibition of common salt in the hæmoptysis, should by no means supercede the use of occasional bleeding when indicated by plethora, nor of that diet which the state of the pulse or of the stomach, may require.

3. I HAVE given the common salt in one case with success, in an hæmorrhage from the stomach, accompanied by a vomiting; and have heard of several cases in which it has been supposed to have checked a discharge of blood from the nose and uterus, but I can say nothing further in its favor in these last hæmorrhages, from my own experience.



*A Case of HÆMOPTYSIS, related in a Letter from Mr. WILLIAM JONES, Surgeon at BIRMINGHAM, G. B. to Dr. DUNCAN at Edinburgh, dated September, 1786.\**

“MRS. S. of this town, had had a violent cough, during the greatest part of last winter, attended, when I first saw her, with an alarming degree of *hæmoptysis*, plethora, the usual symptoms of fever, and frequent profuse cold sweats. She was thus circumstanced on the evening of May 26, 1786, when I took away some blood; and as she was costive, prescribed an opening mixture to be taken at stated intervals, until her bowels were opened. The next day, I directed a grain of the fox glove (*digitalis purpurea*. Linnæi) in pills, to be taken every morning and night. Four doses were sufficient to remove the *hæmoptysis*. And she recovered in a few days, to the degree of health she had before its appearance. Other instances of similar success, have occurred, both to my friend Mr. Mynors, and myself, and that without the use of venæsection, in certain reduced, scrophulous, and leucophlegmatic habits.

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\* *Vide Duncan's Medical Commentaries. Decad. II. Vol. I.—Edinb. and Lond. 1787.*

IN the attendant symptoms of hæmoptysis, such as quick circulation and fever, venæsection being premised in plethoric cases, the *fox glove* occasionally administered, may be readily managed, so as soon to bring down the most rapid pulse to its natural standard, without occasioning any violent symptom whatever. In consequence of these properties, it will be found capable of preventing the necessity for repetitions of bleeding, which has frequently occurred in this complaint when urgent."

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#### INCONTINENCE of URINE.\*

ASTRINGENT and corroborating medicines were formerly the remedies generally prescribed in this disease; but the method of cure has within these few years been improved by Dr. Dickson, physician to the London hospital. Having observed in a variety of cases, that blisters covering the *vertebræ* of the neck, and going obliquely to the shoulder, were remarkably more useful in palsies of the upper extremities, than when applied to these parts, he formed the resolution to try the effects of them in palsies of the lower extremities, by laying them upon the region of the *os sacrum*. This experiment he repeated several times, with as much success as convinced him that vesicatories proved infinitely more advantageous thus used, than when applied either to the thighs or legs.

FROM the observations which Dr. Dickson had already made, he was induced to try the effects of a blister laid on the region of the *os sacrum* in an incontinence of urine; knowing that most of the nerves, which go to the bladder, pass through the *foramina* of that bone. The first person on whom he made the trial, was a girl about thirteen years of age, who had labored under an incontinence of urine during four years. She had taken bark and elixir of vitriol in no small quantities, and afterwards valerian, with the volatile julep, for a considerable time. A large blister being applied to the *os sacrum*, the incontinence of urine was totally removed within twenty four hours.

THE

\* *Vide Modern Improvements in the Practice of Physic*, by Henry Manning, M. D.—*London*. 1780.

THE next case of an incontinence of urine, in which he tried this remedy, was accompanied with a palsy of the lower extremities, and its good effects were remarkable in respect of both these diseases. The patient, who was thirty two years of age, had been seized with the palsy about a year before his admission into the London hospital; and at this time he was attacked with a suppression of urine, which notwithstanding the use of various medicines, lasted four days, attended with great distention of the belly, and excessive pain. His urine then came away involuntarily, and he had so obstinate a costiveness, that he never went to stool without taking some purging medicine.

AT first the patient was ordered two ounces of *tinctura sacra* to be taken immediately, and a spoonful every night and morning, or occasionally, to keep his belly open; besides half a drachm of bark, with the same quantity of valerian, to be taken three times a day. Four days afterwards a large blister was applied to the region of the *os sacrum*; the effect of which was so great, that in less than twenty four hours he could retain his water above an hour at a time, and in a week for two hours; the incontinence of urine gradually diminishing, until the disease entirely disappeared.

THE efficacy of blisters thus applied in incontinence of urine, Dr. Dickson has repeatedly ascertained in several cases; and the fact derives additional confirmation from other experiments communicated by Dr. Fothergill, of Northampton.

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*Extract of a Letter from Dr. ROBERT HAMILTON, Physician at Lynn Regis, to Dr. DUNCAN, giving an Account of a successful Method of treating INFLAMMATORY DISEASES, by MERCURY and OPIUM.\**

I HAVE taken the liberty to send you the following summary account of a successful method of treating inflammatory diseases with mercury and opium, which has been practised here almost  
 eighteen

\* *Vide Medical Commentaries, by Andrew Duncan, M. D. F. R. S. &c. Vol. IX.—Lond. 1785.*



eighteen years, and I believe is scarcely known any where else in the kingdom ; and therefore, I flatter myself you will think, may, with propriety, be inserted in your valuable Commentaries, that it may be communicated to the world.

THE following circumstance first led me to this method of treating inflammatory distempers.

AT the close of the year 1764, the fleet which returned from the East Indies, brought a worthy surgeon of the navy to England, who had served in that country eight years. By this gentleman I was informed, that the established method of curing the hepatitis, or endemial inflammation of the liver, incident more particularly to Europeans than the natives in that country, was by mercury : That mercury was, in general, esteemed a specific in that disease : That the method was, after the patient had lost some blood, and taken some gentle purgative, to have a strong mercurial ointment rubbed in on the region of the liver, and to give either calomel, mercurius alkalifatus, or the mercurial pill, until the salivary glands were affected by the mercury, or the inflammation removed : That the sooner a gentle spitting was raised by these means, the sooner the patient got well : That this method of cure was generally successful, if employed early in the distemper ; but if it was neglected, the liver, which was commonly so turgid as to be perceived externally to be enlarged, soon suppurated : That he had had a number of patients with suppurations in the liver, from this disease, under his care, and had opened many of those abscesses. Some of his patients thus treated had recovered, but more became tabid, and sunk under the profuse discharge.

OUR diseases are nearly the same with those of similar situations in India ; particularly the bilious autumnal remittent and intermittent fevers, an allowance being made for their difference in violence and malignity, from the greater exaltation of the subtle poisonous miasmata, by the intense heat of the climate in India. We have sometimes a most dangerous hepatitis. Some patients in that disorder falling under my care, soon after my friend's arrival from India, I gave the method of cure with mercury a trial, and found it successful. I used the ointment in very few instances, and gave no preparation internally but calomel ; to which I soon, however, found it necessary

necessary to add opium, in order to relieve that distressing concomitant of inflammation, the pain, which happily answered that purpose most effectually.

I CONSIDERED, that the general cause (be what it may) of an inflammatory diathesis, must be the same, whether the inflammation is seated in the meninges, pleura, lungs, liver, diaphragm, or any other internal membranous part; and therefore, the circumstance of locality could make little or no alteration in the general intention of cure. From these premises, the following deduction naturally arose.

As mercury had proved so successful an agent in removing inflammation in the several instances above mentioned, it was reasonable, from analogy, to conclude, that it would prove equally so in every kind of inflammatory disease. Wherefore I was determined to give it a fair trial in every one, as opportunities offered for that purpose, and flattered myself, from the data before me, that my experiments would be attended with success.

THE peripneumony was the first disease that fell under my care, after this resolution was taken. The success attending the administration of calomel and opium here, filled me with astonishment. I was successful in a great number of cases, and under a variety of circumstances. I have had the satisfaction to see women far advanced in pregnancy, in a manner rescued from death, in the last stage of the peripneumony, by calomel and opium, after every other means, which had been tried, had failed in relieving the patients. I had the pleasure afterwards of seeing them go their full time, be safely delivered of living children, and enjoy the happiness of bearing several others since that period. I have known many a life saved in the symptomatic, variolous and morbillous peripneumony, by these medicines; and I never saw any remedies afford so certain and speedy relief in obstinate dry catarrhus coughs, as those, particularly when continued until the mouth became affected by the mercury. The same means have proved equally efficacious in pleurisies. But the most extraordinary and early relief I ever saw calomel and opium give, was in the phrenitis and paraphrenitis, which has been repeatedly experienced in a great number of cases. Inflammations of the intestines, and other parts within the abdomen, have most readily yielded to this treatment. I have, in the 66th volume of the Philosophical

sophical Transactions, in the account of a puncture made into the bladder through the anus, for the cure of a suppression of urine; mentioned the use of calomel and opium in that disorder. I have known the greatest benefit arise from those medicines, in child bed fevers, with highly inflammatory symptoms. In the inflammatory angina, calomel mixed with thebaic tincture and honey, laid upon the root of the tongue, and swallowed gradually, has frequently given great relief.

HAVING succeeded in the most unequivocal manner, in curing local inflammatory diseases by this practice, my experiments were next directed to that formidable malady of general inflammation, the acute rheumatism; and I had the satisfaction to see this also give way most readily to it.

OUR mode of practice, in this town, in all inflammatory diseases, arising either from an internal or external cause, is as follows :

BLOOD is to be taken away in the beginning of the disease, according to the violence of the symptoms, and the age and constitution of the patient. The bowels are then to be opened, either by glyster or an eccoprotic purgative. After which a bolus is administered every six, eight, or twelve hours, as the degree of inflammation requires; consisting of from 5 to one gr. of calomel, and from 1 to  $\frac{1}{2}$  gr. of opium, with any conserve: Plentiful dilution is strictly enjoined. The distemper commonly gives way in forty eight hours, and soon terminates.

IF the fever is violent, accompanied with a dry contracted arid skin; emetic tartar, and sometimes camphor, are added. And I beg leave here to observe, that I never found any medicine, either in a simple or aggregate state, produce so certainly a relaxation of the skin, and a plentiful discharge from its pores, as a composition of calomel, opium, emetic tartar, and camphor, which has also the advantage of increasing the evacuations by stool and urine: From which it would appear, that the glandular secretions, in general, are most essentially promoted by this composition.



129  
OBSERVATIONS

ON

# PHTHISIS PULMONALIS,

AND THE USE OF THE DIGITALIS PURPUREA IN THE  
TREATMENT OF THAT DISEASE ;

WITH

*PRACTICAL REMARKS ON THE USE OF THE*

## TEPID BATH.

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BY ISAAC RAND, M. D. A. A. et S. H. 306.

AND PRESIDENT OF MASSACHUSETTS MEDICAL SOCIETY.

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READ AT THE REQUEST OF THE MASSACHUSETTS MEDICAL  
SOCIETY, JUNE 6, 1804.

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BOSTON :

PRINTED AT THE REPERTORY OFFICE,

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1804.

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AT a Meeting of the MASSACHUSETTS MEDICAL SOCIETY, June 6, 1804.

VOTED—

That Drs. WELSH, BARTLETT and SPOONER, be a committee to wait on the President, and return him the thanks of the Society, for his Discourse, this day read, and request a copy for the Press.

T. DANFORTH, *Recording Sec'y.*

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*Boston, June 7, 1804.*

The Discourse read at the request of the Council of the Massachusetts Medical Society, is respectfully submitted to your disposal.

*Your humble Servant,*

ISAAC RAND.

Drs. WELSH, BARTLETT and SPOONER.

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OBSERVATIONS ON

PHTHISIS PULMONALIS, &c.

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NO disease is more frequent or fatal than the Phthisis pulmonalis, the prevention and cure are among the desiderata in our system of medicine.

THE occurrence of it in Cities and Country is obvious to every Physician : nearly one quarter of the bills of mortality is to be attributed to this disease : and it must be acknowledged to be almost invariably fatal under the usual modes of cure.

AND we cannot but deplore its ravages the more, as it destroys those who are in the prime of life, and not often past its meridian.

THIS loss to the publick is elegantly expressed in the funeral oration of Pericles on the Athenian youth who perished in the Samian expedition, that the loss which the Commonwealth suffered by the destruction of the youth was like the loss, which the year would sustain by the destruction of the Spring.

To point out its latent and insidious, as well as the more obvious causes would require a volume.



WHEN we consider the extent of the surface of the lungs, the organ primarily affected in this disease,\* whose surface, the bronchiæ 1635 square inches, the vessicles 20,000 square inches, the whole surface of the lungs, make therefore 21,635 square inches, or 150 square feet; equal to ten times the surface of a man's body, which at a medium, is computed at fifteen square feet.

As the whole blood of the animal incessantly passes through the lungs, by comparing the proportion, which the lungs bear to the whole body, we may make some estimate of the great difference of the velocity of the blood in each.

† It appears, that 4. 34 pounds of blood pass through the heart in a minute, and in 36. 3 minutes, a quantity equal to a middle sized man, or 160 pounds of blood, will pass through the heart: then the same quantity must also pass in the same time through the lungs, since the left auricle and ventricle, are supplied from thence with blood to be circulated through every other part of the system.

FROM whence it follows, that the velocity of the blood must be very much accelerated in the lungs. And when we reflect upon the very delicate structure of this organ, the number of vessels, the importance of its use, and the many accidents to which it is exposed, we shall be less surprized that so many, than that so few persons are the fatal victims of it.

AMONG the remedies lately introduced, the digitalis purpurea is the most prominent. I therefore will give a concise history of it, and its modus operandi, with a case or two subjoined, with cautionary hints.

\* Hale's vegetable staticks, Vol. 1. page 238-39.

† Hale's hæmastaticks Vol. 2. page 63, 4, 5.

THE digitalis purpurea of Linæus has been employed in medicine since the sixteenth Century ; and in some cases of phthisis pulmonalis with permanent success ; and has been celebrated as a certain remedy, and condemned as a poison, from that period to the present time.

\* THE first physicians who employed it, in pectoral complaints, are extravagant in their encomiums on it.

FUCHSIUS in his historia plantarum, to whom we are indebted for its name, was the first that introduced it into medicine ; he speaks highly of its utility in this disease. Gerard and Parkinson, two of the most celebrated older botanists extol it as an expectorant ; and Doctor Withering has given a manuscript note of Saunders, found in a copy of Parkinson's herbal, which mentions consumptions as infallibly cured by a decoction of fox glove leaves in water. Salmon in his family diet, says it is a specifick in consumptions.

BUT Ray, Boerhaave and Haller, assert its effects as generally deleterious. These discordant opinions may be accounted for, by considering that among the poor, where it was at first chiefly used, its incautious exhibition would naturally lead to this conclusion, that it was a poison ; but that when it was directed and its exhibition under the eye of an intelligent and vigilant physician, its use was attended with the most surprising effects and cures.

DOCTOR Withering, was the first, I believe, who mentions its peculiar property as a diuretick in dropsies ; previous to that period, it was celebrated in epilepsy and scrophula as well as consumption.

\* Medical and Physical Journal, passim, voce digitalis purpurea.

WE are indebted to Dr. Darwin and Sir G. Baker for many ingenious and well conducted experiments in pulmonary consumptions, evincive of its singular effects in retarding, and partially suspending the motion of the heart and arteries.

PREVIOUS to a detail of its effects in this disease, I will endeavour to give some idea of its *modus operandi*. Notwithstanding many physicians disdain all pretences to theory in medicine, and aver that they depend solely on facts, yet when they are requested to explain their opinion, they always shew that their practice is founded on some theory previously adopted. To theorise is to think, and that physician who thinks or theorises the most closely, and reasons analogically on diseases, will, *cæteris paribus*, be the best physician.

MANY years since, \* De Haen in his *Ratio medendi*, maintained, that the extremities of the arteries, in consequence of certain diseased actions, secreted pus. This opinion has been supported and proved by that accurate and successful anatomist, John Hunter.

EVERY physician may discover the pus, by examining the discharge from the purulent ophthalmia, psorophthalmia of newborn infants, coryza, and in many cases of the pulmonary influenza, when no ulcers exist. The purulent discharge from either of these diseases, being mixed with distilled water and vitriolick acid, by agitation they will form a homogeneous fluid. Then add caustick alkali to the mixture; the acid having a greater affinity to the alkali than to the pus, the pus will separate and by its greater gravity will subside in the fluid; while the mucus,

\* Dr. De Haen Vol. 1. Chap. 2. de Paris Generatione.



with which it was blended, will continue to be intimately mixed with the water ; thus the pus will be detected.

It is acknowledged that pus confined in a cyst secluded from the air is innocuous, and, except from its gravity, and pressure, excites no perturbation in the system.

THE motion of the heart and lungs, although not synchronous is commensurate with each other, and an accelerated circulation of the blood is attended with a correspondent increased respiration, and a retardation of the circulations with a slower respiration ; from whence it follows, that the more the circulations are retarded, the less pus is formed, either by the diseased action of the arteries or by ulcers in the bronchiæ ; and the less frequent the respiration, that process is retarded and partially suspended, by which it has been ascertained that the pus is aerated by its attraction of Oxygen. The digitalis, by its action on the vital powers, promotes two important processes ; it promotes the absorption of the pus before it is converted into an ichorous poison by the air, and by lessening the irritability of the heart and arteries, prevents the profuse secretion of pus. Thus these two processes mutually aid each other and prove curative.

THE cautious and continued use of the digitalis will produce these effects, and often render them sufficiently permanent to effect a cure of phthisis pulmonalis.

“THESE changes, sometimes without any previous sickness of the stomach, will be gradually produced, although a nausea is often excited, and by a peculiar sympathy between the stomach and the heart, the pulse is retarded in consequence of nausea ; and as subsequent to the retardation of the action of the heart, absorption frequently oc-

curs. It has been supposed that nausea, a diminution of arterial motion and absorption are mutually and necessarily related to each other."

THE same effects have been attempted to be produced by sailing long sea-voyages, a succession of gentle emeticks and swinging, have in many instances been attended with the happiest effects, as may be seen by consulting Gilchrist on sea-voyages, Reid on the effects of emeticks in phthisis pulmonalis and Carmichael Smith's essay on swinging. Each of these remedies, by inducing nausea, vertigo, has powerfully and sometimes permanently retarded the action of the heart and lungs, promoted absorption and cured the hectick.

MUDGE, in his treatise on the Catarrh, relates the case of a man, who laboured under phthisis pulmonalis, who expectorated such quantities of pus, with fever, night sweats and every concomitant of this disease, that death seemed inevitable, as the disease eluded every method of cure. However, after some time, to his surprise, the expectoration lessened, the cough subsided, his appetite and digestion increased, he acquired flesh, and was restored to his usual health. He died some time after of an acute disease, the small pox. Upon inspecting his thorax he discovered that the phthisis pulmonalis was cured by the absorption of the whole right lobe of his lungs. One side of his chest was deficient of its lobe, and that part of the trachea to which the lobe appended was closed up. In this case, we discover the curative process was conducted and finally accomplished by the absorbents removing the diseased part. The digitalis, had it been employed, might have contributed to their curative exertions.

"It has been observed, that diseased parts of the body may be removed by depriving them of all supply of blood from the arteries; and it is now known, that where this cannot with safety be attempted to so full extent, on account of the intimate connection between the parts to be removed, and such as we wished should remain, that the same effect may be produced by diminishing to a certain degree the arterial supply of the part; at the same time that we leave the action of the absorbents in full force." This is the process so completely effected by Mr. J. Hunter's scientifick operation for the cure of the popliteal aneurism, which he suggested from theory, or reasoning a priori.

By the same mode of operation of the absorbents, digitalis removes the tubercles in the lungs. When the digitalis has produced a retardation of the pulse and respiration, adequate to our wishes, and is attended with an intermission of the pulse and nausea, its use must be suspended. Upon the suggestion of Dr. Beddoes, I have experienced a partial succedaneum in a strong infusion of camomile flowers, in keeping the pulse depressed. Beddoes, Withering, Drake and Fowler have been so explicit in their direction in the use of this plant, that I would recommend them to every physician. Davy, a celebrated chymist, and who attends at the pneumatick institution, Dr. Beddoes says, is engaged in the analysis of the digitalis, and should he discover an analagous substance, it would contribute much to the future success in the treatment of consumption, and Dr. Beddoes very justly observes, that we may presume that nothing stands alone in nature. And a substance of similar effects on the



stomach and arterial system may lurk among the articles of the *materia medica*.

THE saturated tincture of *digitalis* is the preparation which I have used with the most success. The powder made into pills I some time since administered, but I now prefer the tincture, as the dose can be increased or diminished by drops. I never have used the infusion. Previous to the use of the *digitalis*, if there is any pain in the chest, or an hæmoptysis: if the pulse is hard and the respiration difficult, and the patient not advanced in life, venesection will be necessary. A blister should be applied to the side, between the shoulders or over the sternum in the course of the mediastinum, and the bowels gently evacuated. The tincture of *digitalis* may be administered three or four times in a day, beginning with 12 drops and increasing each dose one drop, till the number of pulsations of the artery is diminished to 50 or 60, and continued at that number 'till the disease is removed. I have increased them to an 100, four times in a day; at night I have generally, when the cough has prevented sleep, given one grain of opium.

THE *haustus salinus* in the intermediate time, I have experienced beneficial, cooperating with the general intention of the *digitalis*; all the neutral salts retard the circulations and diminish the irritability of the heart, by their action on the stomach.

THE physician should pay the strictest attention to the state of the pulse, the respiration, the state of the stomach and the appetite. Should it have a very sudden effect in depressing the circulations, and inducing an intermission of the pulse, sickness at the stomach with lan-

gour and faintness, we must immediately suspend the use of it, lest sudden death ensue. The physician should see his patient, at least every day, as few persons are so conversant with the state of the pulse and respiration, as to enable them to judge of the propriety of continuing or suspending the medicine.

THE late Dr. T. Bulfinch related to me the case of Mr. ——— who was afflicted with cough dyspnæa, and anasarca swellings of the extremities; all these complaints were soon removed by the digitalis in pills, which the Doctor gave his patient every day himself; after some time from imprudence, the disease recurred and he again applied to the Doctor and requested, as it was not always in the power of the Doctor to see him and administer the medicine himself, to give him 3 or 4 dozen of the pills, assuring the Doctor that he would punctually follow his directions; the Doctor knowing his precipitancy and imprudence, with reluctance complied with his request.—In a week or ten days his complaints were again removed, but he sent for his physician, and informed him he had some new affections which, if he could remove as speedily and effectually as he had his cough, &c. he should be as well as he ever was in his life. His pulse then was very slow and intermittent, his appetite gone; he had a constant nausea and vast depression of his spirits. The Doctor directed him to omit the pills immediately. He answered he had found them so efficacious, that to accelerate his cure he had taken all of them two days before. The Doctor expostulated with him upon his imprudence in disregarding his advice, and left him with a presentment of his fate. He was found dead in his bed the next morning, his wife by his side unconscious of his fate.

THIS case demonstrates the very sudden and permanent effects of the digitalis on the heart and arteries.

THE diet as soon as the stomach will admit of it, should consist principally of animal food and wine, and as soon as the expectoration is diminished to 2 or 3 ounces in the day, if there is no difficulty in respiration, nor pain in the chest, the bark should be given in decoction, and exercise in a carriage should be used every day.

SOME time since, I attended a young lady, ætatis 20, who had lost by phthisis pulmonalis and hæmoptysis, three brothers and one sister. She had a very distressing cough, with difficult and short respiration, pains in the chest, hectic pulse and feverish paroxysms. She had an indolent tumor of the cervical glands, as large as a pigeon's egg, apparently, though slowly tending to suppuration. I could perceive a fluctuation of matter in it—a variety of medicines had been used without any benefit. I then began with the tincture of digitalis as above mentioned. I applied blisters to the sides, between the scapulæ and to the sternum in constant succession 'till the pulse was retarded to 60 or 65 pulsations in a minute. She took an 100 drops three, some times four times in a day for a fortnight. The cough lessened, the expectoration decreased and her appetite increased. In this lady, the digitalis after it had diminished the frequency of the pulse from 110 to 60 and 65 produced a severe nausea with pukings; during these operations the tumor lessened and finally disappeared, her appetite increased, her strength returned, she retrieved her flesh and has been in good health nearly two years. Her diet was animal food, oysters and Madeira wine.



I WILL only add the case of Mr. R. Crocker, *Æt.* 32 ; by profession a founder and artist in fine brass, constitutionally healthy, but for some years since, has had an orthopnœa, and dry cough. Many months previous to his confinement in February last, he was obliged to relinquish his business. On the 29th of the month I first saw him, he was then afflicted with a severe cough, attended with a copious purulent expectoration, difficult respiration, hectic fever, night sweats, inappetency, nausea, and was emaciated to a skeleton : his legs were œdematous, pulse 100 to 110 in a minute. He supposed his case remediless, and only to gratify his friends, consulted a physician. Under all these accumulated distresses, I thought his opinion correct. With only the hope of smoothing his pillow in death, I prescribed for him. After obviating some difficulties of the bowels, I prescribed the tincture of digitalis, as above directed. The third dose of 15 drops relieved his orthopnœa, and reduced his pulse to 75 in a minute ; three days after, the pulse fell to 60, then to 50 and 55. I continued to increase the drops 'till he had attained to 100 drops four times in a day, when it produced a nausea, and intermittent pulse. I then suspended the use of it for a day or two, and directed a strong infusion of camomile flowers, which obviated the disagreeable effect of the tincture. He soon returned to the use of the medicine, his pulse continued stationary 55 morning, and 60 to 65 evening 'till his recovery. When the stricture of his breast and orthopnœa were removed, to which the perpetual blisters contributed, he began to take the bark in decoction three times in a day, and opium at night. The digitalis rendered his body soluble.

His diet consisted of animal food, oysters and Madeira wine, a bottle was his daily quantity, and notwithstanding his residence was in a dirty alley, and the weather from February to the middle of May, unfriendly to his complaint, that he could not take fresh air 'till the last of April ; the expectoration gradually lessened and assumed a better colour 'till the cough and expectoration ceased the beginning of May. He has recovered his flesh and strength, and thinks himself in better health than he has enjoyed for many years. He desisted from medicine the beginning of May, his pulse is now (June 1, 1804) regular, and at 75 or 80 in a minute.

It has been observed by European physicians, and corresponds with my experience, that the small particles of stone, wood, and metals, and other hard substances inspired by the workmen, have produced this disease in the artist who work in these substances. The fine particles are often inspired into the vessicles. The absorbents not being able to remove them, they produce the nucleus of tubercles, which if medicine, or the strength of the constitution do not remove, suppurate and terminate in phthisis pulmonalis. The process is illustrated by an experiment by \*Dr. Haighton, upon an animal of a class particularly exempt from consumption. He threw two drachms of quick-silver into the veins of a dog. In two days a feverishness ensued, as was apparent from the hardness and quickness of the pulse, difficulty of breathing, a cough soon succeeded. These symptoms increased 'till the death of the animal. On dissection tubercles were found in the lungs ; many of these tubercles were full of purulent matter ; and on cut-

\* Saunders on the Liver.

ting open those that were still firm, a globule of mercury was discovered in the centre of each, forming the nucleus to the circumscribed inflammation or tubercle. Here it is evident, that the mercury having been delivered by the veins to the heart, and by the heart to the arteries, was by them effused into the cellular substance of the lungs, and probably into the whole body. The absorbents not being able to remove the particles from the lungs, the arteries were stimulated to secrete the matter of which tubercles consist.

THE most decisive good effects have been experienced from the use of digitalis in Hæmoptysis, Epistaxes and active hæmorrhages from the uterus. In very urgent cases, I have given twenty five drops every hour till the discharge is suppressed. In one instance of hæmoptysis in a very athlectick young man, where the discharge eluded the force of every other medicine, it reduced the pulse in eight hours, from one hundred in a minute, to fifty pulsations, and stopped the hæmorrhage.

WHILE this medicine is employed in active hæmorrhages, a total abstinence should be enjoined as well from fluids as solids, the most bland, and least irritating fluids in large quantities may, by the distention of the arterial system protract the hæmorrhage. I have given it with complete success in a case of insanity and mental derangement.

I WILL conclude my observations upon digitalis purpurea, with remarking that although I do not think with Dr. Beddoes, that it is as infallible a remedy in consumption as mercury in lues venerea, and bark in intermittents, I must acknowledge and with pleasure assert that I have cured more by this medicine than by all and every other medicine conjoined.



I SHALL add a few hints on clothing, and some observations on the warm bath. The statistical histories of Sir J. Sinclair, to the most cursory observer, furnish many interesting facts, respecting situation, temperature, clothing and diet, on the human constitution.

THE effects of thin and warm clothing are very obvious by comparing the health of the English and Dutch. Doctor Coggan, a physician of eminence in Holland, \* observes that the Dutch and the English, who have resided some time in Holland, are forcibly struck with the coughs whether catarrhal or consumptive, so universally prevalent in England, in almost every season of the year. At church and at the theatre, devotion and pleasure are always interrupted, and sometimes totally destroyed by incessant coughs and expectorations; whilst in the largest assemblies in Holland, instances of a similar kind are scarcely known. This very great difference must be ascribed to the contrast observable between the two countries in the construction of their houses and peculiarities of dress. The majority of the houses in Holland even at the present day are the reverse of what we should esteem comfortable. The rooms are large and lofty, the separation betwixt the upper and lower apartments is by painted boards only, which if they were not covered by mats or carpets, would transmit the light as well as air. A gentleman who had resided many years in Canada observed that Coughs, catarrhs and consumptions were rare diseases in that climate, and that he was surprized at the incessant coughing in our Churches. He observed the air of Can-

\* Beddoes on Consumption.

ada was colder than ours, and he was astonished at the thin dress of the Ladies here, so very ill adapted to ward off the inclemencies of the weather, in the Winter and Spring ; and rejoined, that the houses of the opulent and most of those in easy circumstances were lofty and well aired. The inhabitants, as soon as the leaves of the trees changed their colour in autumn, enveloped their bodies, next to their skins, in Welsh flannel ; and when they took an airing, were wrapped in furs, so that any exercise produced an agreeable glow over the whole surface of the body ; perpetual action continued and promoted Health. The ancients observed that the Gods sell all good things for Labour and Exercise.

\* Two Englishmen, and Brothers, resided in Holland ; one continued the dress and manners of the English, disdaining to wear a flannel waistcoat, and braving the elements with an open breast ; he fell an early victim to his predilection for English fashions at 30. The other conformed to the Dutch mode of dress ; wore flannel waistcoat and drawers, by which he encountered the inclemency of the weather with impunity. He fished and hunted in the worst of weather, and was a stranger to colds and coughs, and enjoyed uninterrupted health till 57, when by accident he lost his life.

THE warm bath is well adapted to relieve many of the effects of colds and by invigorating the whole system to ward off the catarrhs to which the valetudinarian and those disposed to consumptions are most incident.

THE practice of bathing was universally adopted among the Greeks and Romans. The institution was originally

\* Beddoes.

the preservation of health, but as riches and luxury increased in those nations, edifices of the most superb, sumptuous and elegant nature were erected. In the baths of the Romans, there were five apartments. The tepidarium, calidarium or laconicum, the solium, the baptisterium or Piscina, and the frigidarium. The time will only admit of a few observations on the tepidarium and solium.

It has been much agitated among the learned, whether, and how far, the writings of the ancient physicians contribute to our knowledge in the cure of diseases. Their usefulness may be inferred from this single consideration. That the mechanism of the human body, always the same, a faithful history of diseases must necessarily be one of the surest guides to the proper application of remedies. And if the diagnosticks and prognosticks be of the greatest consequence in Physick, and are only to be collected from long and accurate observation, then the histories of diseases by Hippocrates and others, who were so assiduous in their observations, so clear and exact in their descriptions, must be allowed to contain a valuable treasure of medical knowledge. They have been verified by subsequent Physicians and quoted as authorities. *Opinionum commenta delet dies, naturæ judicia confirmat. Cicero.*

Celsus is the only Roman Physician, whose work *de Re medica*, survived the destruction of the barbarous ages. He lived in the first Century of the Chr. Æra in the reign of Augustus. It has been disputed whether Celsus was a practitioner of Physick, or only to complete a liberal education, acquired all that was then known in Physick and Surgery. We must suppose from his very particular directions, in most cases, that he was a regular Practitioner of Physick and Surgery. His Surgery is preferable to his Physick.



AMONG the ancients, to whom the individual, was of so much importance to the publick, bathing was as frequent as washing among us ; every person in easy circumstances bathed once every day ; many in affluent circumstances, 5 or 6 times in a day.

The prohibition of Bathing was among the severe mortifications to which certain priests in Greece, were bound by the rigid rules of their order.—

THE use of the bath came from the East into Greece, and thence into Italy, and the north of Europe. The baths were esteemed of so much importance to the health of the people ; that Princes and magistrates procured them for the use of the publick. In the life of Augustus, it is mentioned, that Mæcenas was the first that established the warm bath at Rome. The Roman Emperours erected superb publick baths, assigned revenues to support them, appointed Slaves, *Servi balnearii*, who heated the baths ; others kept the clothes of those who bathed, a third rubbed them with oil : and all were under the inspection of certain officers, who had the charge of the baths. In many of the reigns there was no sort of constraint on account of rank or quality, all sorts of persons and sexes were admitted gratis to the baths, which the Emperours maintained at their own expense ; a largess which they gave the people on occasion of any publick rejoicing, called *balneum gratuitum*.

Often the masters of the World bathed indiscriminately with their Subjects. Titus admitted the common people to bath with him in the thermæ he had built ; and Spartian relates that the Emperor Adrian, bathing in a croud of people, discovered an old Soldier, rubbing his back a-

gainst the Wall. Adrian who knew him, by having seen him in the service, asked him the reason of it. It is, replied the old man, because I have no servant. The Emperour immediately gave him Slaves, and a revenue sufficient to support them. Seneca, in his 86th Epistle, shews us of how great importance the Romans esteemed the tepid baths, in the time of the republick, where he observes, "what pleasure there would be in going into the baths, which a person knew to be tempered by the hand of Cato in his Edileship, or Fabius Maximus or one of the Corneli, for this function, the most noble Ediles performed, of inspecting those places, frequented by the people, and requiring cleanliness, and a salutary temperature: not such as has lately been brought into use, in which the heat is so violent, that one would imagine a Slave convicted of some crime, were condemned to that punishment."

That the warm bath was considered both, by the Greeks as well as Romans, as corroborant, is evinced by a dialogue from Aristophanes in which one of the Characters says "I think none of the sons of the Gods ever exceeded Hercules in bodily and mental force" upon which the other asks "where didst thou ever see a cold bath dedicated to Hercules?" It is impossible to ascribe such an absurdity to the ingenious and consistent people of antiquity, as to make them consecrate to the God of strength, what they held to be so very debilitating as we do. They therefore must have esteemed the warm bath invigorating to the system, and from their constant use of it, must have been competent judges of it. They did not consider its frequent use as tending to enervate the body; they meant it in a moral, not a physical sense. Celsus, as I mentioned, must have considered the tepid bath invigo-

rating, it is evident from this passage. The valeludinarian imbecillis homo ; iturus in balneum, vitare debet, ne ante frigus aliquod experiatur, ubi in balneum venit, paulisper resistere, experique num tempora adstringuntur, et an sudor aliquis oriatur : illud si incidit, hoc non secutum est, inutile eo die balneum est : perungendus est is leniter, et referendus ; vitandumque omnimodo frigus, et abstinencia utendum. At si temporibus integris, primum ibi, deinde alibi, sudor incipit, fovendunos aqua calida, tum in *solio* desidendum est : atque ibi quoque videndum, num sub primo contactu aquæ calidæ summa cutis inhorrescat, quod vix tamen fieri potest, si priora recte accesserunt : certum autem id signum inutile balneum est. The ancientsspent some hours in the tepid bath, they were therefore accommodated with a seat, *Solium* ; therefore Celsus says, tum in Solio desidendum est, he is to sit in the bath at his ease. And Suetonius, in the life of Augustus, mentions the Epigrams which that Prince composed in the tepid baths. The elder Pliny, while in the bath, had his Secretary at hand, to make extracts of what appeared worthy of remark.

\* THE English antiquarians adduce many instances, in history, of the great predilection of their ancestors to bathing ; many of their nobility had warm baths in their own houses ; and there were publick baths, to which those who could not afford these means of health, repaired. That a custom so congenial with the increasing disposition to luxury and refinement should have fallen into disuse, would afford matter of great surprise, if the cessation of Leprosy, and the introduction of lues venerea, at these periods, did not solve it. The moderns as well as the

\* Strutt, quoted by Beddoes.



ancients bathed, promiscuously, in one large bath, and in the same fluid. The dread of receiving the lues venerea, by absorption, deterred many from its use; and the decrease of Leprosy finally extinguished the desire of that indulgence. The modern separate baths and clean water for each person obviate these objections. I know of no place except in Russia where they now promiscuously bathe.\*

WITH the revival of learning in the 15th century, the Sovereign called in the aid of the priest, and converted bathing into a religious rite, and persuaded the people they could wash away their sins, and obtain absolution. Such baths were denominated baths for the soul, *balnea animaria, et refrigeria animæ*. I might add, that the use of Shoes and Stockings and linen Shirts, has rendered that of the bath much less necessary to cleanliness among us, than among the ancients, who knew nothing of the pleasures of clean linen, which we now esteem essential to comfort and convenience. Linen was such a luxury among the ancients, that the master of the feast furnished no napkins to his guests, and each brought his own: this custom which cannot but shock us, continued after the reign of Augustus. Martial says Hermogenes, who frequented the best company, used to filch the guests' napkins, and when for fear of his Hawk's talons, they brought none to the feast, Hermogenes contrived to purloin the table cloth. Martial, in a couplet, transmits him to immortal infamy.

*Attulerat mappam nemo dum furta timentur,  
Mantile e mensa surripit Hermogenes.*

Perhaps the disuse of the bath may, in some measure, be attributed to the fashions of medicine. We have all

\* Cox's travels in Russia.

of us been witnesses to the various changes that have been introduced into the practice of physick, depending not so much upon reason as Hypothesis, which is another word for fashion. Medical hypothesis and false analogies from the writings of Physicians, have caused that to be avoided upon principle, although a false one, the use of which might not in every case be so necessary as it anciently was ; and because the promiscuous use of it had sometimes been injurious. We shall be less surprised that the people in general, have neglected the bath, however salutary in its effects : when Physicians themselves are but just emerging from the false analogies of their predecessors, and some of them reverting to unbiased observation. Physicians and Philosophers reasoning from false analogies have been induced to think, that the warm bath almost universally debilitates, and that the cold bath strengthens, in the same proportion that it recedes from warm. They have reasoned from the effects of heat upon inanimate substances, and have drawn conclusions from substances that have no affinity with each other ; and because cold contracts and hardens inanimate bodies, and heat dilates, elongates and weakens them, therefore heat and cold must operate in a similar manner upon animals. The mechanical Physician, being so absorbed in considering man, as an hydraulick machine, subject to the same laws, that he forgets the animating principle ; and in his reasoning upon the animal functions, does not introduce the vital and sensitive cause. Professor Cullen asserts, and justly, that cold below  $62^{\circ}$  is sedative and debilitating. However, those who from speculation never use the tepid bath from an apprehension of its debilitating effects, will, when uniform experience convinces them of its corroborating power, I hope, change their opinion. Tissot, in his Essay on diseases of literary and sedentary people,

and diseases of people of fashion, says, "That, to persons afflicted with nervous debilitating diseases, the warm or tepid bath, used fasting, is of the greatest utility," and adds, "I have seen three patients, of this class, in a confirmed hectic, whose situation seemed desperate, yet were perfectly cured by this remedy."

Would time admit, I should adduce a cloud of evidence, in support of the corroborating effects of the warm bath, from the writings of Beddoes, Darwin, Marchard and Franks, who directed the warm bath to weakly, nervous persons, such as, instead of recovering their health, as they actually did, ought to be dissolved all together, if the warmth given to the waters had a relaxing effect.

THE Author of Zoonomia says, the use of the warm bath, from  $96^{\circ}$  to  $98^{\circ}$  for half an hour, daily, for three or four months, he has known of great service to weak people, and is perhaps the least noxious of all unnatural Stimuli. And when Dr. Franklin was in England, many years since, he recommended to him the use of the tepid bath, twice a week, to prevent the too rapid access of old age, of which he then thought he felt the approach. We know the Dr. continued the use of it till his death, which would have been preserved many years, had not the cruel disease, the stone, destroyed him. Nothing can more forcibly impress the mind with the invigorating powers of the tepid bath, than its effects on persons labouring under the disease Pelagra, which is exceedingly frequent among the peasantry of Lombardy. This debility cannot be more certainly removed by any means than by the use of the tepid bath. The debility is so



great, that many patients are obliged to be carried, although the bath is not above forty paces from the Ward. Many who can walk are yet so weak, that they cannot get into the bath without help. The appearance of these people, in going in and coming out, is truly miserable. If they were not supported by the attendants, they would stagger like drunken persons. In the space of four, or at most, six weeks, which is the usual course of bathing, they are commonly so much restored, by the use of the warm bath, as to return to their friends and ordinary employments.\* In fine, the warm bath from  $94^{\circ}$  to  $98^{\circ}$  by diffusing the circulations, and removing partial pressure, prevents spasms, relieves the chronick Rheumatism, and most erratick pains: and by cleansing the pores, and determining the circulations to the surface of the body, promotes the secretion of that fine fluid, that gives delicate softness and smoothness to the skin, which heighten the charms of youth and beauty; and by its invigorating effects retards the rigidity of the fibres, and the coalescence of the capillary vessels, the harbingers of old age.

\* Marcard's med. and chirurg, Journal.

FINIS.

## MASSACHUSETTS MEDICAL SOCIETY.

*At a Statute Meeting of the Fellows of this Society, held June the 6th, 1804, the following Gentlemen were elected Counsellors for the year ensuing: Viz—*

### SUFFOLK.

Isaac Rand, John Jeffries, Charles Jarvis, Lemuel Hayward, Thomas Kast, John Warren, William Eustis, Thomas Welsh, Aaron Dexter, Joseph Whipple, William Spooner, John Fleet, Thomas Danforth, David Townsend, Isaac Rand, 3d.

### ESSEX.

Edward A. Holyoke, Micajah Sawyer, Joshua Fisher, Thomas Kitteridge, Benjamin L. Oliver.

### MIDDLESEX.

Josiah Bartlett, John Brooks, Isaac Hurd, Oliver Prescott, jun, William Gammage.

### HAMPSHIRE.

Ebenezer Hunt, Henry Wells, Chauncey Brewer.

### MAINE.

Daniel Coney, Nathaniel Coffin, Shirley Erving, Ammi R. Mitchell.

### BRISTOL, PLYMOUTH and BARNSTABLE.

William Baylies.—James Thatcher, Gad Hitchcock.—Samuel Savage.

### WORCESTER, BERKSHIRE and NORFOLK.

Israel Atherton, Oliver Fisk, D. Frink, sen.—Erastus Sargent, Timothy Childs.—Cotton Tufts, Amos Holbrook, John Bartlett.

*At a Meeting of the Council the succeeding Day agreeably to Statute, the following Gentlemen were elected Officers: Viz.*

JOHN WARREN, *President.*

JOSHUA FISHER, *Vice President.*

THOMAS DANFORTH, *Recording Secretary.*

JOSEPH WHIPPLE, *Corresponding Secretary.*

THOMAS KHAST, *Treasurer.*

LEMUEL HAYWARD,

THOMAS WELSH,

AARON DEXTER,

JOSIAH BARTLETT, and

JOSEPH WHIPPLE.

} CENSORS.

THOMAS DANFORTH, *Recording Secretary.*

**MEDICAL PAPERS,**  
COMMUNICATED TO THE  
**MASSACHUSETTS MEDICAL SOCIETY.**  
NO. II.—PART I.



LETTERS

TO THE HONORABLE SENATE

1802

THE HONORABLE SENATE OF THE UNITED STATES

IN SENATE

January 15, 1802

REPORT

OF THE

COMMISSIONERS OF THE LAND OFFICE

IN ANSWER TO A RESOLUTION

PASSED BY THE SENATE

ON THE 15TH OF JANUARY 1802

AND

IN RESPONSE TO A RESOLUTION

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OFFICERS  
OF THE  
MASSACHUSETTS MEDICAL SOCIETY.  
1806.

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JOHN WARREN, M.D. *President.*  
JOSHUA FISHER, M.D. *Vice-President.*

CENSORS.

LEMUEL HAYWARD, A.M.  
THOMAS WELSH, A.M.  
AARON DEXTER, M.D.  
JOSIAH BARTLETT, M.D.  
WILLIAM SPOONER, M.D.  
JAMES JACKSON, M.B. *Treasurer.*  
THOMAS WELSH, A.M. *Corresp. Secretary.*  
JOHN C. WARREN, M.D. *Rec. Secretary.*  
JOHN FLEET, M.D. *Librarian.*

CENSORS

OF THE DISTRICT SOCIETY OF WORCESTER.

Oliver Fisk, John Green, John Frink, Jonathan Osgood, Thomas Babbit.

COUNSELLORS.

*Suffolk.*—Isaac Rand, Lemuel Hayward, John Jeffries, Thomas Kast, John Warren, Thomas Welsh, Aaron Dexter, William Eustis, William Spooner, John Fleet, Isaac Rand, jun. Thomas Danforth, James Jackson, John C. Warren, John C. Howard.

*Essex.*—Edward A. Holyoke, Micajah Sawyer, Joshua Fisher, Thomas Kittredge, Benjamin L. Oliver, John D. Treadwell.

*Middlesex.*—Josiah Bartlett, John Brooks, Isaac Hurd, Oliver Prescott, William Gammage.

*Worcester.*—Oliver Fisk, Israel Atherton, Jonathan Osgood.

*Hampshire.*—Ebenezer Hunt, Henry Wells, Chauncey Brewer.

*Berkshire.*—Erastus Sargeant, Timothy Childs.

*Norfolk.*—Cotton Tufts, Amos Holbrook, John Bartlett.

*Plymouth.*—James Thatcher, Gad Hitchcock.

*Bristol.*—William Baylies.

*Barnstable & Nantucket.*—Samuel Savage.

*Maine.*—Daniel Cony, Nathaniel Coffin, A. R. Mitchell, Shirley Erving, Samuel Adams.



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## MEDICAL PAPERS.

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### ARTICLE I.

*A Medical Discourse on several Narcotic Vegetable Substances, read before the Massachusetts Medical Society, at their Annual Meeting, June 4th, 1806. By JOSHUA FISHER, M. D. Vice-President of the Society.*

THE narcotic plants constitute a very important part of the materia medica. The life of the patient often depends on the accuracy of the physician's knowledge of their medicinal effects: it is therefore presumed, that every attempt to extend our information, on this important subject, will be received with candor.

Instead of attempting a regular essay on any one of these medicines, permit me, on this occasion, to offer some miscellaneous, practical remarks respecting several of them, subjoining concise histories of a few cases.

B

*Opium,*

## 2 MEDICAL COMMUNICATIONS.

*Opium*, the most important remedy which the vegetable kingdom affords, claims the first place. Much time has been spent in debating, whether this medicine ought to be classed among the stimulants or sedatives. A particular discussion of this question would be foreign to my present purpose : let it suffice to observe, that if we consult experience and observation, we shall find that medicine, as well as disease, frequently affects the human body in a manner very different from that which is pointed out by the framers of systems :—that *Opium* may either increase sensibility and action, diminish them, or produce the one effect in succession to the other ; that it is capable of increasing action in one part of the body, while it diminishes it in another—of removing morbid actions, while it increases some of those that are natural—of exciting or increasing morbid actions—and of destroying action altogether.

*Opium* appears naturally to produce, at first, an increase, in some degree, of sensibility and action ; and afterwards, in a still greater degree, a diminution of both. From the experiments of Dr. CRUMPE, it appears, that given to a person in health, it gradually accelerates the pulse for about half an hour ; afterwards, for a longer or shorter space of time, generally

## MEDICAL COMMUNICATIONS. 9

ly according to the quantity given, the pulse is retarded : but such is the variety of operation, produced by the various combinations of natural temperament, state of the system, quantity taken, and other circumstances, that the one or the other of these effects is often scarcely perceptible. In small doses, it appears sometimes to act as a simple stimulant ; producing exhilaration, watchfulness, &c. while in large doses, under different, or even the same circumstances, it produces effects directly the reverse, without any perceptible previous excitement. In cases of painful spasms, we commonly find the disease increased, in five or six minutes, even under a dose that will, in twice that time, produce an alleviation. In cases where the dose is insufficient, by one half, to remove the spasms, the effect seems to be the same, as under a full dose, when the time is insufficient by one half ; that is, the disease is usually augmented ; but with this difference, that, in the one case, the augmentation is only for a very short time ; in the other, it becomes, in some measure, permanent. Hence it appears not improbable, that Opium may be exhibited in such doses, and at such intervals, as to aggravate the disease in almost any conceivable degree. How often this may have actually taken place, in practice, cannot be determined : we have histories



#### 4 MEDICAL COMMUNICATIONS.

histories of some cases of severe spasms, in which physicians have adventured to give a grain every hour : in such cases, it is certain that much larger doses may be given, without any effect, except that of increasing the complaint.

In exhibiting Opium as an anodyne, it is of importance that the requisite dose should be given at once, or in as short a space of time as possible. In ten or twelve minutes, it may be ascertained whether the dose given will prove sufficient to afford relief ; if not, another ought to be given immediately, and the repetition continued, till a complete relaxation be obtained. Such doses may always be given, at once, with perfect safety, as that any quantity, which the case may require, may be exhibited in the space of an hour,

To exemplify the practice here recommended, I will mention the case of a young lady, aged seventeen, who was seized with excruciating spasms, probably tetanus, the consequence of a rupture of the sartorius muscle. Some slighter symptoms, of a similar kind, had taken place on the preceding day, which had required twelve grains of Opium ; that dose was therefore ordered to be given immediately. In ten minutes, finding no abatement of  
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## MEDICAL COMMUNICATIONS. 5

the spasms, twelve grains more were given ; and the dose was repeated every ten minutes, till she had taken six doses, or seventy-two grains. This quantity removed the spasms, produced a comatose insensibility, slow, stertorous breathing, and a slow, full pulse. In eight hours, the spasms began to return, and the Opium was given as before. A few of the first doses increased the symptoms ; but, after she had taken the full quantity, they disappeared. In this manner, and with the same effect, the Opium was repeated, at intervals of eight hours, for three days, when the spasms ceased, and she recovered. During this period of three days, she took nearly eleven drams of excellent Opium, and not a grain more than was absolutely necessary.

In the colica Pictonum, or Devonshire colic, Opium has sometimes been given, for the purpose of obtaining temporary relief : but it does not appear to have been known, that, in a sufficient dose, it is capable of effecting a sure, safe and speedy cure. For many years past, I have not seen a single case of this distressing disease, which has not yielded in about an hour. No preparation is necessary, except the evacuating of the stomach, which is generally done by a spontaneous puking, before we see the patient. The quantity of Opium,  
which

## 6 MEDICAL COMMUNICATIONS.

which has been found necessary to effect a cure, has varied, from fifteen to forty grains. I never have known the disease to return; nor any disadvantage to arise, from this mode of practice; nor have I ever found any difficulty in moving the bowels, in the course of twenty-four hours, after the removal of the pain. Although Opium alone will succeed, it is better to join with it a few grains of calomel, in divided doses.

The same mode of practice has been pursued in cholera, and with equal success. A gentleman, of about sixty-five years, was seized with this disease, in so violent a manner, that, when I first saw him, a few hours after the attack, his countenance was cadaverous, his nose and hands cold, the blood had become stagnant around his nails, the pulse was hardly perceptible, and every symptom indicated his speedy dissolution. The severe nausea and puking rendered his stomach unable, for some time, to retain the necessary quantity of Opium; as soon as was practicable, we got down sixty grains, ten of which were returned by vomiting. The quantity retained, soon removed every distressing symptom: gradually, and with difficulty, he recovered his strength.

The



## MEDICAL COMMUNICATIONS. 7

The *Stramonium* is another valuable medicine, of the same family. I shall confine my observations, respecting it, to its use in cases of epilepsy. This practice is not new : but it seems not to have been attended to, at least in this country, as it deserves. Epileptic fits, in respect to the use of the *Stramonium*, may be divided into three classes. Those of the first class occur daily, or very frequently. In these cases, after removing worms, acids, and whatever may irritate, the patient is to be kept constantly under the influence of the medicine ; for this purpose, he will require, every day, one or two doses, according to the severity of the symptoms. The saturated tincture is the most convenient form for children. The requisite dose may be known by the dilation of the pupils. While the patient is kept in this state, the fits will rarely take place, and the habit of recurring is gradually broken.

In the case of a boy of five or six years old, who had been attacked three or four times, daily, for several months, his senses were so far impaired, that he would devour the most filthy substances, with the same avidity as the most palatable food ; after the first dose of the *Stramonium*, the fits ceased ; but the tendency

## 8 MEDICAL COMMUNICATIONS.

dency to return made it necessary to continue the medicine for some weeks longer; in process of time, he recovered his reason.

A child, of about three years, was subject to fits; one generally took place every day; they had not, however, been of so long continuance as in the preceding case: by mistake he took the Stramonium in too large a dose; it produced severe vomiting, convulsions, stupor, &c. which continued through the day: the parents were so terrified, by the effect of the first dose, that they could not be induced to give a second: the fits, however, never returned.

Fits of the second class either recur at regular periods, frequently monthly, or the patient is warned of their approach, by some previous symptoms. In either of these cases, the Stramonium is to be given when we apprehend the access of a paroxysm, and to be discontinued when the danger is past.

All the cases of these two classes, which have been under my care (and the number is not *very* small) have been cured by the Stramonium, assisted by chalybeates, or such other medicines as particular symptoms appeared to require.

Cases

## MEDICAL COMMUNICATIONS. 9

Cases of the third class do not observe any regular period, nor do they give any warning of their approach. They are generally excited by some other disease ; or by some irregularity of the patient. In cases of this kind, the Stramonium cannot be used even occasionally, with a prospect of much benefit ; and to give it, during a long period, lessens its antispasmodic effects, and debilitates the patient.—I have seen it afford some relief, but never knew it perform a cure.

It has been observed, that a medicine, by being extolled beyond its merits, generally fails of supporting even that degree of reputation to which it is justly entitled. This observation may be applied to the *Cicuta* : but although it may be incapable of curing cancers, yet it is a very valuable medicine. In cases of a scrofulous affection of the abdominal viscera, it is, perhaps, the best that is known. The use of it is generally followed by an eruption on the skin ; which seems to indicate a translation of the disease. A striking instance of this occurred in a boy, of five or six years old. I found him feverish and emaciated : the secretion of urine was small ; the abdomen tumid and tense. A dose of calomel operated as a cathartic, and removed the tension. The whole surface of the abdomen then

B

presented



presented to the feel a congeries of small tumours, resembling a cluster of grapes. The *Cicuta* was prescribed. A cutaneous eruption soon appeared on various parts, which eventually covered the whole surface of the body: it took off every inch of the cuticle, and even the nails from his fingers and toes. The internal use of the hemlock was continued, and the child lay, for a considerable time, wrapped in a sheet, spread over with an unguentum e *cicuta*. As soon as the skin was so far healed, that I could examine the abdomen, I found every appearance of internal disease removed: some tumefied glands had appeared on the surface, particularly in the groins; these would not yield to the hemlock, but gradually disappeared, after the patient had recovered his strength.

In cases of phthisis pulmonalis, arising from a scrofulous affection of the glands of the lungs, the *Cicuta* demands our attention. It must be acknowledged, that it has not, always, answered my wishes; particularly where the symptoms of scrofula were ambiguous; but I must say that in several instances I have seen it produce much better effects, than it has been my lot ever to witness from the use of the fox-glove.

It

It is hoped that the *Cicuta* will prove an efficacious remedy in cases of jaundice, produced by biliary concretions.

About twenty-five years ago, I had under my care a man, who, for several months, had laboured under a jaundice, which resisted the common methods of cure. Reflecting on the usual cause of the obstruction of the common biliary duct, it appeared to me improbable, that a biliary calculus, considering the usual form and size, should of itself, and at once, be able to produce a complete obstruction; there must therefore be a spasm or contraction of the duct. The acute spasmodic pain, often felt when a calculus first lodges in the duct, appeared to favour the supposition. A simple antispasmodic must therefore be the best remedy; and the *Cicuta* presented itself, as the most promising. Whether the theory be just or not, is submitted. The facts are, the man took the hemlock, every night, in increased doses. The morning after he had taken the first full dose, the bile began to pass, and the obstruction was soon completely removed.

Considering the variety of causes, which are capable of producing an obstruction of the biliary ducts, it is not supposable that hemlock, or indeed that any medicine, should, in every instance,

instance, be able to remove it. Three cases of this disease, combined with others, have happened within my knowledge, where neither this, nor any other means, succeeded : but, excepting those three, every patient, who has been under my care, for this disease, since my first use of this remedy ; and every one, who, within my knowledge, has used it, has been cured by it ; and, in one instance, the cure was effected by a single dose,

I will add only the case of the late President WILLARD : as he resided in this vicinity, it is probable, that most of the circumstances are known to some of the gentlemen present. When I first saw him, he had laboured, for more than six months, under a complete jaundice. During this period, he had punctually followed the advice and prescriptions of his physicians. Among other means, a course of calomel had been pursued, as far as was judged prudent. The obstruction remained fixed. I gave him some pills of the extract of hemlock, desiring him to take one the first night, and to increase the dose by an additional pill, every night, till he felt the usual symptoms of a full dose. On the seventh night, for the first time, he felt a slight nausea and giddiness. The next morning, he found that the bile had begun to pass through the duct. He  
continued



continued the medicine in full doses, for some time longer : the passage became free, and was never afterwards obstructed.

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ARTICLE II.

*An Account of a Case of Ruptured Uterus. By OLIVER PRESSCOTT, jun. A.M. Fellow of the Massachusetts Medical Society.*

MRS. E. aged thirty-nine, of a very short stature, but extremely corpulent, had been married about seven years, during which term she had been with difficulty delivered of two mature, but dead children, and suffered five abortions. About nine years since, she had an inflammatory fever, ever after which she was frequently troubled with a pain at her stomach, from which she found the greatest relief by the smoking of tobacco.

February 23, 1800, she was taken in labour of her third child, at 10 o'clock in the evening.

24th. At 3 o'clock, A. M. Dr. W. her physician and accoucheur, was called upon to attend. During all this day and the following night,

#### 14 MEDICAL COMMUNICATIONS.

night, her pains were regular and strong, but effected the dilatation of the os internum to a very small degree only.

25th. The pains the same; at 10 o'clock in the morning the membranes broke, and gave vent to a large quantity of water; the dilatation of the os internum at the same time did not exceed in diameter that of a pistareen. The pains continuing without effect, Dr. P. was called upon, who visited her at 8 o'clock this morning, and finding the head presenting, and resting upon the brim of the pelvis, the os internum thick and but little dilated; he having attended this patient in her first labour, and knowing, from the difficulties which then occurred, that the pelvis was not of the common standard, but small and distorted, and under these circumstances judging it more safe to trust still to the operations of nature, than to attempt any extraordinary assistance, especially as her pains continued strong, and her strength was but little exhausted, he recommended patience, venesection, and a cooling cathartic, and took his leave. The bleeding was not complied with, but the cathartic operated kindly, and appeared to have a good effect.

26th. The

26th. The pains and their effects much the same. In the evening Dr. P. was again called upon, and finding all things much in the same state in which he had left them thirty-six hours before, except some increase of the pains in frequency and strength, and expecting from the difficulties attending her former labours, and the present appearances, an unfavourable termination of the business, he recommended the calling in of Dr. H. a man of long experience ; and in the interim endeavoured to support the patient with LL, mild cordials and soothing words, carefully watching, at the same time, the progress of the labour.

27th. Dr. H. arrived at four in the morning ; and finding the pains a little abated in their frequency and force, the os internum dilated to about the size of a crown-piece, feeling thick and soft during the intermissions, but tense and hard in the paroxysms of pain, and the head of the foetus still resting upon the brim of the pelvis, he agreed in opinion, that these circumstances could not justify an immediate attempt to deliver her by forcible means. It was therefore concluded to avail themselves of the advantages expected to be derived from delay, and the effect of opiates exhibited the preceding evening, and to wait the vigorous return of her pains, especially



16 MEDICAL COMMUNICATIONS.

cially as her strength and spirits held out remarkably well, and there was no particular symptom of present imminent danger.

Thus she continued until about 10 o'clock, A. M. when her pains were observed to increase both in frequency and force, and the os internum was found to be so far dilated, that her delivery was judged practicable without greatly endangering its laceration.

On consultation it was now unanimously agreed, that the pains could never effect her delivery, and that, to put her strength to further trial by still further waiting their effects, might endanger her life, by the inflammation and mortification, which the long continued and violent pressure of the head upon the parts might induce, although her strength was not yet greatly impaired. Accordingly an immediate attempt to deliver with instruments was resolved upon, and every disposition made for that purpose. But before Dr. H. to whose lot it fell to operate, could be seated, in the midst of a strong pain, the patient suddenly complained that she felt such a sensation as she was sure "she had never before experienced;" and being asked where it was, she clapped her hand upon the abdomen, and said "it extended from the stomach to the pubes;" and being further asked,

asked, what it resembled? she said "she could compare it to nothing but a violent inflammation." It ought to be remarked, that this new and extraordinary sensation in the abdomen seemed instantly to arrest and suspend the operation of the natural labour pain, in the midst of it. But this new sensation, however, in a few seconds subsided in a considerable degree; and after the usual period between her pains had elapsed, there was the appearance of another labour pain coming on, which immediately terminated like the preceding one, only in an increased degree of this unusual distressing sensation of the abdomen; and this again, in its turn, in a great measure soon subsided, leaving after it a sense of fulness and pressure at the pit of the stomach, an uneasy feeling in the abdomen, together with a short, laborious respiration; and from this time forth till her death, she never felt the least symptom of another labour pain. But these last mentioned symptoms remaining, she begged to be raised from a supine to a sitting posture, which was accordingly done: but in her transition from the bed to a chair, a small quantity of fluid was discharged upon the floor, which had the appearance of blood, and much alarmed the attendants, but which upon a close inspection was found to be only a bloody water. The symptoms taking this strange turn, the resolu-

tion to attempt her delivery was suspended, in order to investigate the nature and cause of these unexpected and extraordinary occurrences. However, being placed in a chair, she sat and smoked several pipes of tobacco, which she had been accustomed to do for the colic, and at length complained of drowsiness, and was then at her own request laid upon the bed, and allowed to repose. She slept quietly, except being once or twice awaked to moisten her lips, for nearly three hours. After thus reposing, she was again raised into a chair. At this time a quantity of bloody water, which the assistants again took for an hemorrhage, appeared, which during her repose had penetrated the sheet that was round her, and stained the linen upon the bed. On this account, as also on account of the evident marks of increasing debility which now seemed to be fast gaining upon her, such as an increased frequency, smallness and weakness of the pulse, and an exhausted countenance, her danger was deemed imminent; and although she had no pains, it was judged expedient to make a further examination, to ascertain whether the os internum might not be so far relaxed as to admit the hand, in order to bring the child footling. But what must have been the surprise, on finding that no part of the foetus could be discovered by the vaginal touch! It had completely receded



ceded beyond reach, and no part of it could be felt !

A consultation was now holden, and the symptoms retraced, in order to investigate the cause of this last most extraordinary phenomenon ; and here recapitulating the leading and most prominent of them, led to the following conclusions :—The patient had been exercised with regular pains for about eighty-two hours, without the head's passing into the pelvis in the usual manner, although it properly presented : the distortion of the pelvis must have been the true cause of preventing its descent : —Furthermore, in the midst of a strong pain, this unusual sensation of the abdomen took place, which instantly, as it were, arrested and suspended the operation of the labour pain, and finally prevented its recurrence ; and directly after this unusual sensation of the abdomen occurred, a discharge of bloody water from the vagina followed :—and lastly, upon examination being made sometime afterwards, it was found, that the foetus had quitted its former situation, and had receded completely beyond reach, so that no limb of it could be discovered. The nature of these symptoms, together with the order in which they succeeded one another, in conjunction with an evidently increased fulness of the abdomen in  
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the epigastric region, (which ought to have been before mentioned) now dispelled every ambiguity and doubt, as to the nature of the case, and imposed the disagreeable task, of giving a frank and unequivocal opinion, that the uterus was ruptured ; that the foetus had passed through the breach into the cavity of the abdomen, and that it was absolutely out of the power of art to afford her any essential relief. It was unanimously agreed to give no additional pain, by a fruitless attempt to deliver her, but to keep her as easy as possible, and wait the tragical event. She was, at her own request, undressed, and put into a warm bed, and laid apparently easy for a while, and then a singultus with some vomiting came on, together with an increased difficulty of breathing, with a very quick, small pulse ; and at 7, P. M. she began to throw up copiously an atrabiliary matter, which continued to recur at short intervals, with increased labour of respiration, which each puking in some measure relieved, until 13 minutes past 10 o'clock, P. M. being about eleven hours from the cessation of her pains ; when, calling for the bowl in which she puked, and making an effort, she raised the matter in her throat, but being too far exhausted to throw it out, she quackled, sunk, and expired, almost without a gasp, and apparently in the calm exercise

cise of her mind, and the free enjoyment of her senses, till within five seconds of her exit. Her pulse grew quicker and smaller as her dissolution approached ; and for a considerable time before she expired, while she evidently possessed her reason, it entirely ceased to be perceptible.

As the attending physicians had put their judgment to the issue, by openly giving their opinion of the nature of the case while she was living, they asked permission to inspect the body after her decease, in order to demonstrate to themselves and others, the truth or error of their prediction. The request was granted, and the following are the phenomena which presented themselves :—

Upon laying open the parietes of the abdomen, the first thing that presented itself, was a large male foetus, entirely excluded from the uterus, lying across the abdomen, its back towards the abdominal muscles, its belly in contact with the intestines of its mother, its breech in the right hypocondrium, its shoulders inclining a little diagonally towards the left ilium, its head covered by the intestines, and lying in contact with the back of the mother, in the left cavity formed by the projection of the lumbar vertebrae, its face towards the  
right



right ilium, its occiput towards the left. This child weighed, with only the addition of a small thin rag, ten pounds and three fourths of a pound. The cavity of the abdomen was about two thirds full of a bloody water, similar to that discharged from the vagina, before mentioned. The placenta laid loose among the intestines, between the body of the child, and the contracted uterus, as did also a quantity of coagula. The uterus was contracted to nearly the size of a large child's head, and lacerated. The laceration occupied its inferior and posterior part, and extended longitudinally from within two inches of its cervix, to its greatest transverse diameter, and transversely more than half way round the uterus. On laying open the uterus longitudinally, it appeared at the fundus to be about one inch and a half thick, and towards its cervix where it was not lacerated, it was less than a third part of that thickness : its vessels were entirely emptied of blood, neither was there any thing in its cavity, except some portions of the *membrana decidua*. The right ovarium was affected with an incipient dropsy, and on being laid open, discharged about three ounces of pellucid water. The stomach contained a large quantity of black matter, similar to what she had vomited.

The

The impatience of the husband of the deceased, and the attendants, prevented that close and accurate examination and admeasurement of the pelvis which the circumstances of the case demanded. There was however observed a remarkable curvature of the spine, and projection of the upper part of the sacrum, which formed a large cavity above in the left side, in which the head of the foetus was found resting. Hastily returning the parts into their proper situation, the gall bladder happening to present itself, some concretions were perceived therein: it was therefore dissected, and there were found within it one hundred and fourteen gall stones of different sizes, two much larger than the rest, all weighing, after being well washed and dried, thirteen pennyweight, two grains. The whole quantity of bile in the cyst did not exceed a small tea-spoonful. The liver had no unusual appearance, except an evident increase of size. This affection of the *vesicula fellea* was probably the cause of those chronic pains of the stomach, which she had termed colic, and from which she had found relief by smoking tobacco, as has been observed.

Groton, Dec. 7, 1801.

ARTICLE III.

*A Case of Compound Dislocation of the Tibia, at the ankle joint, accompanied with a fracture and loss of part of the fibula, and likewise with a fracture of the femur in two places. By RICHARD HAZELTINE, F.M.M.S.*

*Berwick, March, 1804.*

*To the MASSACHUSETTS MEDICAL SOCIETY.*

GENTLEMEN,

IT is presumed that the history of the following case will serve to display, in the most impressive manner, the wonderful powers of nature in the cure of diseases, when her efforts are unembarrassed, and properly directed—to illustrate the advantages resulting from a considerable loss of blood in cases of violent injury—and to evince the importance of compression in the healing of ulcers, and obliteration of sinuses.

July 2, 1798, I was called in great haste to visit Josiah Kate, of Parsonsfield, in this county; a young man, aged perhaps 18 or 20, who, the messenger informed me, in assisting to erect the frame of a mill, was very badly wounded. He was then about ten miles distant



tant from where I lived (Limerick.) I found him as follows :—The left foot was dislocated at the ankle joint, outwardly, by which the tibia was protruded through a laceration of the common integuments at least two or two and a half inches in length, so that the process of that bone which constitutes the maleolus internus, and the greater part of the smooth surface which forms the joint with the astragalus, were entirely exposed to the air. The fibula, of course, was broken; and it was positively and repeatedly declared to me by the most unquestionable witnesses, that at the time of the accident, several small pieces of something which was white, and which they supposed to be bone, fell from the wound into the water over which he was standing when he received the injury, and swam away: and it appeared clearly, after reducing the foot, that the lower end of the fibula was gone. The femur of the same limb was fractured in two places: the first fracture was about four, and the other, perhaps, about eight, inches above the centre of the rotula, when the limb was extended. From the loss of blood which he had sustained, he was faint, pale and exhausted, and his pulse was small. The hemorrhage had abated by the time I arrived, and he did not complain much of pain, by reason of his being so enfeebled. A physician

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had

26 MEDICAL COMMUNICATIONS.

had been sent for, and came to him ; and by his request I was called. He had made no attempt to do any thing for him, except with a view to restrain the hemorrhage, and keep him as easy as possible. We immediately proceeded to prepare dressings in the following manner :—We made splints of soft pine, in the form of a spatula, so firm as to afford sufficient support, and so long as to extend from the knee to the great trochanter on the outside of the thigh, and as high as was convenient on the inside, and from one inch to an inch and a half in width. So many of these splints, as were sufficient to inclose the thigh, were quilted into a doubling of firm linen (in the manner of women's stays) of such a length as to go round the thigh, and lap four or five inches. The splints were made wider at one end than the other, and the linen was cut accordingly, for the sake of a better adaptation to the form of the thigh. We prepared nothing for the wound but lint and a common roller. We then placed him on a firm bedstead, and under-bed, filled with straw, and made flat and even as possible ; and with proper assistance extended and replaced the foot, and applied to the wound dry lint, well dusted with flour, pulv. alum, &c. (as the blood still continued to ooze) and confined it with a compress and single headed roller. We next reduced

duced the thigh in the usual manner, and applied the above-mentioned splints, which we confined within two or three substantial pieces of quality, which, when doubled, were of sufficient length to extend round the outside of the splints, and admit of a slip-knot by passing one end through the doubling, and then tying. To make the whole more secure, a large broad splint, covered with tow, was applied on the outside of the thigh, extending from the knee to the hip; and another on the inside, extending from the knee upwards as high as was convenient; and both were confined with proper ligatures round the other dressings. A similar splint was applied to the outside of the foot and leg, and so fixed as to turn the bottom of the foot a little inward, with a view to cover, as much as possible, the denuded bone, with the soft parts. After having finished the application of the dressings, with a pillow fixed under the ham we placed the limb in a bended position, the patient lying on his back. He was in great distress the first night, and slept but little, or none; but he gradually became easier, so as to sleep some the next day and night. The blood continued to discharge from the wound, but in so small a quantity, that, considering the state of his pulse, no danger was to be apprehended.

After



After this period I had the sole care of him, and gave him such medicines as were occasionally necessary, such as mild laxatives—a few doses of opium—several portions daily of some cooling neutral salt; and applied to the injured parts, clear spirit, camphorated spirit, and solution of ceruss. acetat. and particularly to the wound, nothing but the most simple dressings; and allowed him a light, nutritious diet.

Although the injury which he had received, and the loss of blood which he had sustained, were so great, yet, for the first two or three weeks, it appeared from his pulse and the condition of the injured parts, that more was to be done to guard against excessive inflammation, than to remove or prevent debility; for in that course of time he required several doses of senna and salts [sulphas sodae]\* and the frequent exhibition of cooling neutral salts, together with a mild diet. And although the discharge from the wound was very considerable, he did not require, at any time, the use of the bark, elix. vitriol, or any thing of the kind; but, under the abovementioned management, he recovered as fast as could possibly be expected, and in fact faster,  
for

\* That the administration of laxatives is preferable in such cases to the injection of enemas, must, I think, be obvious to every one.

for at the time of the accident it was a pretty general opinion that the limb ought to be amputated ; but the prospects of every day warranted a more confident hope of recovery, with a decent limb of flesh and blood, instead of a wooden one.

The most untoward circumstance, which demanded special attention, during the above-mentioned period, was the formation of a large abscess up and down in the direction of the fibula, extending from the foot at least half way to the knee. This I opened by making a small puncture with a lancet where the integuments appeared thinnest, which was at the site of the outer ankle ; upon which there was a discharge of about a pint of pretty-well formed pus. In the further treatment of this abscess I pursued a course of practice, which I had been early taught by my preceptor in medicine to regard as a most important point in surgery ; namely, the employment of compression. After making the small puncture, by which the contents of the abscess were suffered gradually to discharge, I had recourse to the *digitated* bandage,\* and a large, oblong, compress

\* If I mistake not, I think I am not alone in the use of the word *digitated* as applied to a particular form of bandage ; and that, therefore, my meaning will be obvious, and the bandage which I speak of, well known to every considerable medical reader.

## 30 MEDICAL COMMUNICATIONS.

compress of linen, which were applied as closely as possible without impeding the circulation of the blood. The body of the bandage was so long as to extend, after being doubled, from the bottom of the heel, nearly to the knee; and the digits were of such length as to admit of lapping and pinning very securely and aptly, not only over every part of the leg as high as it reached, but also over the foot and ankle-joint. It was doubled in such a manner when applied, that the outside digits covered the intersections of the inside digits; thus making the compression as uniform as possible.\* The consequences of this management were, that in the course of two or three weeks, the cavity of the abscess was wholly obliterated; and that side of the leg appeared perfectly sound. The capacity of the sinus decreased so rapidly upon the use of the compress and bandage, that the discharge became, comparatively, very small in a few days.—In the mean time, the wound at the inner ankle bore a good appearance, and healed as fast as could be expected; the fractured thigh united; and he recovered such a degree of vigour, that on the 17th of August he was moved home, a distance of more than two miles, on a litter provided

\* Two of these bandages were prepared, so that when one became foul and unfit for use, it was removed for the purpose of being cleansed, and a clean one supplied its place:—Very great attention was paid to cleanliness.



provided for the purpose, and carried by several men.

From this period he required no particular attention, except what directly related to the treatment of the wound ; which, although it continued gradually to heal, and discharge less and less, remained open about a year : But by that time, the discharge was, perhaps, not more than what flows from a common issue. In the course of that time the process of the tibia which forms the inner ankle exfoliated, and so much of it came away as to weigh one drachm, apothecary's weight. Whenever the flesh in the ulcer became too luxuriant, I employed more forcible compression, or perhaps touched it once a day with a piece of cuprum vitriolat. or applied a little red precipitate, alone, or with burnt alum, forming the pulvis angelicus of Mr. Sharpe. When the discharge was considerable at any time, and perhaps attended with some pain, and the pulse sufficiently vigorous [tense] to warrant their exhibition, I gave active cathartics, such as jalap and calomel, with a little of the pulv. gambog: and nitre, and directed him to live sparingly. For a while, I thought proper to put him under a course of alteratives ; which appeared to be productive of beneficial effects. Upon the whole, under a course of directions

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the most simple and judicious that I was capable of giving, time and nature finally accomplished a cure so far, that his thigh became sound and well shaped, though a little shorter than the other; the motion of his knee was nearly as natural and sound as ever, with a pretty well shaped foot and leg, with some motion of the ankle joint. He wears a leather shoe, with the heel a little elevated, and makes a very decent appearance.

I conclude with a few remarks: And

1st. On the degree of injury.—This was so great, that had the patient been in the army or navy, it is not to be doubted but that the limb would have been amputated. And perhaps so complete a cure could not have been obtained in private practice, had not the circumstances been very favourable. In this case, I had every advantage which could be derived from good nursing, good accommodations, and a happy, amiable disposition in my patient and his friends. I never saw or read of a case so nearly like the above, as one that is the subject of the fourth paper in the fifth volume of “Medical Facts and Observations;” and they both are calculated to evince the propriety and justness of the observation of a late eminent physician and surgeon of my native state, viz.

“that





bones, the ligaments, &c. already in a very inflamed state.

Lastly, The advantages derived from compression.—I believe the most extensive sinuses, after being opened by puncture, may be obliterated by the simple means of a compress and bandage properly applied, more easily and expeditiously than by any other method that can be adopted. I have seen very large cavities obliterated in this way, and believe such means, though simple, will never fail, if judiciously employed. I am clearly of opinion that injections, in such cases, are, to say the least of them, altogether needless, and generally do more harm than good.

R. HAZELTINE.

ARTICLE

ARTICLE IV.

*Narrative of a Case of Preternatural Retention of Urine, in consequence of external injury. By JAMES THACHER, Fellow of the Massachusetts Medical Society.*

PLYMOUTH, June 1st, 1805.

*To the MASSACHUSETTS MEDICAL SOCIETY.*

GENTLEMEN,

ON the twelfth of September, 1803, Jabez Soule, in consequence of a fall astride a rail fence, received an injury of the perineum; the immediate effects of which were pain, tumor, inflammation, and symptoms of strangury, with a discharge of bloody urine. These symptoms were not alleviated by bleeding, and the antiphlogistic course adopted by Dr. Fuller, of Kingston, at whose house he was confined. In about eight days the quantity of urine was diminished; and soon after, a preternatural retention supervened. The passage of the catheter was not at first much impeded, but became more and more difficult, till at length the introduction was found absolutely impracticable. The pressure and irritation occasioned by the bladder being exceedingly distended, the muscular coat of that  
viscus

viscus contracting, and the abdominal and other muscles of the body sympathizing with it, a continual and painful propensity to void the urine was excited, and the symptoms aggravated; which, together with the extreme agitation of his spirits, rendered the patient's condition truly distressing and deplorable.

In these alarming circumstances, every practitioner will perceive the indispensable necessity of resorting to the operation of puncturing the bladder; but such are the prejudices which prevail too generally against the operation, that even in this desperate case, the suggestion was not received with approbation; and so very formidable were appearances, that no one could be justified in prognosticating a successful issue. The patient was informed, the operation would afford him relief, and probably protract his existence for a short period. Doctors Hitchcock and Hayward concurring with me in opinion, the measure was at length acceded to. The perineum being greatly tumified from external injury, and the patient not corpulent, a puncture was made with the trocar above the pubes, and the urine evacuated. Not many days elapsed before the tumor in perineo was observed to increase; and suppuration ensued; the abscess was opened,



ed, and on introducing the probe, a sinus of considerable extent was detected.

October 11th, the patient was removed from Kingston to his own house in Halifax, and committed to the care of Dr. Morton. Soon after this, the abscess in perineo healed, and a tumor again appeared, attended with pain; and, for the first time since the operation, he experienced a propensity to void the contents of the bladder. An incision being made into the tumor, a quantity of urine was discharged from it; and the sinus was found to extend about four inches upwards, and to have connexion with the urethra, which had undergone a morbid change of structure. At this period, a small quantity of urine took its natural course through the urethra; but more escaped from the orifice in perineo; yet it was found requisite to turn the patient on his side, two or three times in a day, to empty the bladder by the canula.

October 25th, our afflicted patient, greatly debilitated, was seized with rigors and violent pains about the region of the right kidney and parts adjacent, attended by inflammatory symptoms, nausea, and constipated bowels; and in a few days after, the left kidney was in the same manner affected. His accumulated sufferings

sufferings had now become almost insupportable, being so extremely exhausted, that an attempt to turn him, even in the gentlest manner possible, produced such agony, that he appeared for several hours as if expiring. This inflammatory attack terminated in a suppuration of the kidneys ; and a considerable quantity of purulent matter was discharged through the canula. At one time, it produced a total obstruction, which was removed by a probe ; and the urine, for six or eight weeks, continued to be turbid and foetid. From long confinement in an horizontal position, and being constantly wet with urine discharged from the ulcer, a superficial inflammation affected his loins ; gangrene and ulceration ensued, which continued to afflict him till the month of March following.

Not long after the puncture with the trocar, the patient complained of exquisite pain, occasioned by the canula irritating the bottom of the bladder ; but substituting one of an inch and an half in length, no inconvenience was experienced. The latter part of the time, it frequently became necessary to withdraw and cleanse the canula of calculous matter, which adhered to it, and rendered its extraction painful and difficult.

About

About the 10th of December, the urine having regained its natural passage through the urethra, the canula was removed, and the orifice in three or four days entirely healed; but he was affected with the ulcer in perineo till the ensuing April.

During the first three months, his bowels were in a state of constipation; nor had he an alvine evacuation, unless produced by an enema or laxative. In the absence of inflammatory symptoms, the bark and wine were freely administered; which, with a proper regimen, effected his restoration.

In May, 1804, he was able to walk one or two miles; and is now capable of performing journies on horse back, and labor on his farm.

JAMES THACHER.



## ARTICLE V.

*History of a Wound of the Femoral Artery. By JOHN C. WARREN, Fellow of the Massachusetts Medical Society.*

*Boston, June 13, 1856.*

*To the MASSACHUSETTS MEDICAL SOCIETY.*

GENTLEMEN,

ON the 20th of December, 1855, Charles Simmons, a lad aged 14, attempting to leap a fence, fell upon the pickets, one of which, half an inch in thickness, entered the upper part of the thigh. A gush of blood succeeded. He however extricated himself, ran across the road about fifty yards, the blood pouring out in a torrent, and there he fell inanimate upon the ground. The flow of blood ceased. He was carried in, apparently dead, and remained so half an hour; at last was revived by stimulating applications, administered by Dr. Bartlett, of Roxbury, who had been called in the mean time.

The next day, when I saw him with Dr. Warren, senior, the hemorrhage had not returned. His pulse then was scarcely perceptible. We examined the limb, and discovered  
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an oblique wound, two inches long, about two and an half inches below the point where the great femoral vessels pass under the crural arch. It was not thought proper to push a probe into the wound, and disturb the coagulum, before we had agreed what course to pursue.

The question now was, whether to tie the femoral artery at once, or to wait and observe. Some of the gentlemen were of opinion, that it might be a branch of the femoral, artery, or it might be the femoral vein; or perhaps the femoral artery, fairly divided and retracted, might in this young subject be closed by a coagulum, firm enough to resist the passage of more blood. It was impossible also at this period to show the lad's friends the danger of the case. Compresses therefore were applied to the wound, with a tourniquet upon them; a firm pad was prepared, which the attendants were thoroughly instructed how to apply in the groin; and when the circulation became more vigorous, it was to be restrained by digitalis.

In three days time he had recovered some force. His limb was not swelled, and possessed the same temperature as the other. At this time there was no pulsation in the popliteal  
G artery,

artery, nor in the anterior or posterior tibial, or posterior fibular ; though it was sufficiently distinct in the corresponding arteries of the other limb. In five days, a slight pulsation was perceived in the popliteal. The young man now seemed to be going on well ; yet his wound had a pale and glossy appearance. On the 29th we were suddenly called to him. The blood had burst out, while he lay in bed, without any movement of his, as he said : but this is not probable, for he was uncommonly restless. In two minutes time the compress was applied, and the hemorrhage restrained. We judged he had lost about a pint of blood.

It was decided to cut down to the artery, and tie it. The boy was laid on a table ; the tourniquet and the compression in the groin were removed ; when, to the surprise of all, the artery did not bleed. The limb was moved in every direction, but no blood appeared. The young man now became uneasy and refractory ; he had suffered so much from previous compression, that he would scarcely allow the wound to be touched. At last, finding him unmanageable, he was put in bed, with directions to watch him carefully, and if the hemorrhage returned, to give him opium  
enough



enough to quiet him for the operation, and inform us immediately.

On the afternoon of the second day, we were sent for. The hemorrhage had taken place many times that day, and was suppressed by the attendants. Preparations were made to secure the artery by compression in the groin, when necessary. An incision was made from the lower lip of the wound three inches along the inner edge of the sartorius muscle, and down to the wounded artery. This vessel being laid bare at the upper angle of the wound, a probe was introduced in the course of the artery to serve as a guide in the upper part of the limb, where the artery lays deep, and difficult of access. The motion of this probe disturbed the coagulum, which covered the artery; the blood burst out, and was very imperfectly restrained by compression. I immediately cut from the edge of the wound upward across the groin, pushed a finger in, and turned out the great coagulated mass; uncovered the bottom of the wound, and felt the blood pouring out, from some part below. The finger in the external orifice prevented the blood from escaping externally; and at last I obtained command of the artery, by pushing the finger under it, and compressing it against the fascia above. Secure from hemorrhage, we reflected, whether  
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it would be best to tie the artery near its wound, or in the groin two and an half inches higher up. Influenced by Mr. J. Bell's opinion, that tying the femoral artery will not endanger the life of the limb ; and still more by that of Mr. Cline, that a ligature should never be applied just below the profunda, because the current of blood down the profunda disturbs the coagulum, and forces open the adhering artery, it was resolved to tie the vessel in the groin,

The end of the finger which compressed the artery was under the sheath of the femoral vessels, just at the edge of the crural arch ; the fascia of the thigh covered the vessels and this finger. At this point I dissected down, through the fascia of the thigh, the cellular membrane below, and the femoral sheath ; separated the great vein and nerve from the artery, and passed with some difficulty a flexible director under the artery, which served to convey a ligature. The artery was tied, and on withdrawing the compressing finger from the wound, we saw with pleasure that no blood followed. The parts were brought together. About twelve ounces of blood were lost in the operation : but the patient was much reduced by previous bleedings, and was therefore ordered

ed some wine, and as cordial a diet as he could bear.

He was easy after the operation. On the third day, no suppuration appeared; and therefore the wound was stimulated with *sp. terebinth.* and *ol. olivar.* The limb was become somewhat œdematous, though equally warm as the other; it was rubbed with the same composition. On the fifth day, a little suppuration appeared, and a small gangrenous spot was seen on the lower part of the leg. The day following, there was extensive separation of the cuticle, partial coldness of the limb, small pulse, countenance collapsed. Bark, wine and aromatics were freely administered. On the seventh day after the operation, fresh hemorrhage; this was partially restrained: it recurred at intervals, and in the evening the patient died.

Next day, I went to examine the wound; but circumstances beyond my controul, prevented an accurate investigation, which might have detected some facts both curious and useful, though perhaps not perfectly novel. The femoral artery, in the upper part of the limb, was completely gangrenous for three or four inches, and two inches of the external iliac in the same state. The ligature remained in its place;



place ; and the final hemorrhage had proceeded from an opening in the sphacelated iliac, above the ligature. I cut out about nine inches of the artery, and carried it off, for a more minute inspection.

When this was examined, it appeared that the femoral artery had not been fairly cut across ; but the wound was lacerated, an inch long, and about a third of the artery's circumference ; its edges rough, without any appearance of the process of restoration. This part, however, had been previously examined. The ligature was loosened by ulceration of the artery, and the cellular membrane included with it, so that it no longer made pressure : but it had produced its effect, for the artery was then reduced to the size of a crow-quill. The artery, being opened above this place, was found to be filled, at the part under the ligature, with a substance, which I think was coagulated lymph. The gangrenous and discoloured state of the parts prevents my being positive on this point. Above the ligature, the vessel was lined with lymph ; but the centre of the vessel was filled by a coagulum which was darker, and appeared to be of blood. The appearances below the ligature were similar, except that the lining of coagulum extended farther, and grew thinner below. These co-

agula

agula were then readily detached from the inner coat of the artery, and the plug of lymph which filled the vessel, under the ligature, was drawn out with considerable ease ; the passage was then large enough to admit the end of a probe. Circumstances alluded to, permitted no better examination of the process which had been going on.

1. On a review of the case, it seems probable that this boy would have been saved, if the operation had been done before the repeated hemorrhages had occurred. These exhausted the vigour of the patient, and destroyed the chance of reaction of the branches of the internal iliac, by which the circulation in the limb must be restored. As for the operation, the patient suffered little from it ; nor was it, that I know of, productive of any inconvenience.

2. This case goes to prove, that obstruction of the femoral artery, especially above the profunda, cannot always be produced without danger to the limb. Whence it should appear, that Mr. J. Bell is somewhat too general in his assertions on this subject.

3. When nature has been left to operate the cure, and the hemorrhage is suspended, it will

will be a long time before the patient should be considered free from danger of secondary hemorrhage, and before he should be allowed to make the slightest movements of the limb. The bleeding is suspended by a coagulum of blood fixed over the wound of the vessel, and entering it a little way. This coagulum is supported by the mass of coagulated blood, which is retained by the cellular membrane and fascia, and other parts. The first named coagulum is, after a very short time, covered by a layer of coagulated lymph, which is effused from the edges of the wound in the artery, and stretches over that wound, upon the coagulum of blood. The caliber of the vessel is not fairly filled by this coagulum, so that the blood still flows through it, and will make its way out, if by any movement the coagulum is disturbed: wherefore there is no safety for the patient, till the coagulated lymph has secured the wound in the artery by a firm, unyielding cicatrix.



## ARTICLE VI.

*Some Observations on Worms infesting the Human Body. Communicated to the Essex Southern District Medical Society, July 1, 1806. By JOSHUA FISHER, M.D. Vice-President of the Massachusetts Medical Society.*

THAT several species of worms are occasionally found in the intestinal canal of the human body, capable not only of existing there, but of propagating; and that these worms are to be found in no other situation; are facts that must arrest the attention, both of the physician and of the philosopher.

Medicines that destroy worms are of two kinds—those that are deleterious both to the patient and the worms, but of which the patient will bear a sufficient quantity to destroy the worms, without suffering any material injury himself: such are, mercury, arsenic, and some of the narcotics—and those that are innocuous to the human body, but poisonous to worms: such are oils and tin.

Attempts have been made to account for the destruction of worms by oil and tin on mechanical principles: it has been supposed

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that oil closes their spiracula ; but these spiracula are not to be found : the fact is, oil is a poison to worms generally, and, not improbably, to every species of them. The opinion that tin kills worms by the sharpness of its points is still maintained by some physicians ; they accordingly give it in large doses, and in the most pointed form. On this principle glass, coarsely pulverized, ought to be a remedy of still greater efficacy ; but either of them is more likely to wound the coats of the stomach, than the worms. A few years ago I knew a man take large doses of what might be called the scrapings of tin ; every dose of which produced severe spasms. Observation has convinced me, that twenty or thirty grains of tin, in fine powder, taken twice in a day, will produce as great an effect as doses that are larger, or more frequently exhibited ; probably because that quantity of it is as great as the gastrick juices can dissolve, while it is passing the stomach and bowels ;—and that the effect of tin, as an anthelmintic, depends very much on its being minutely divided. It seems to act the most powerfully in a state of solution : I am informed, from respectable authority, that small red wine, simmered a considerable time in a pewter vessel, that is, slightly impregnated with tin, is constantly used in some parts of Scotland, as an anthelmintic,

minthic, and with very great success. A strong solution of tin, that could be exhibited with safety, would probably prove a valuable acquisition.

The species of worms most frequently found in the first passages of the human body, are, the teretes or lumbricoides, the ascarides, and the taenia ; I have met with the trichurides ; but very rarely.

The teretes resemble the common earth worm generally ; but the difference is sufficient to prove them a different species. In some cases they are found to be very numerous ; one thousand and nine were discharged from a child in the space of ten or twelve days. In common cases the amalgam of tin never fails to kill them. I have combined the tin and quicksilver in various proportions, and added different substances to render the amalgam pulverable. The following formula is considered the best ;—to five parts of melted tin, add two parts of quicksilver ; mix them, and add one part of testaceous powder ; keep the amalgam melted, and rub until the smallest parts of it disappear : when the mixture is cold, a little additional levigating will reduce it to an impalpable powder. Let three or four drams of this powder be divided into  
twelve



twelve doses, two of which are to be given in a day. This quantity will generally be sufficient for a child ; but sometimes six or even twelve additional doses will be required. If we wish to keep the bowels more open, a little calomel may be added. Should the symptoms be very severe, a large dose of calomel should be given ; otherwise we may lose the patient before the amalgam has time to operate. Sometimes we find the patient in a lethargic stupor, and the action of the stomach, of course, suspended ; at other times, the canal is in a state so debilitated and relaxed, that the powder passes undissolved ; in neither of these cases will this preparation produce any effect. Worms, killed by tin, or its amalgam, are never discharged entire, but are either partially or wholly digested.

I had under my care a boy of about three years, who had the usual symptoms of worms. I gave the tin to no purpose. In the course of six months every kind of anthelmintic was tried in vain. At length I gave him a scruple of calomel, and, before it operated, injected the smoke of tobacco till it passed by his mouth ; during the operation of the medicine, which was very severe, he discharged one of the teretes in a spiral coil, like a bean vine which had twined round a small twig ; it was incapable

pable of being extended to a straight line, and had obviously grown in that form. I presume that it must have been lodged in the appendix vermiformis. A worm in that situation sometimes, and I believe generally, proves fatal. This is the only instance, within my knowledge, of its being dislodged.

The ascarides reside, principally, in the rectum. A brisk cathartic will remove part of them; but medicines which have to pass through the stomach cannot be depended upon; anthelmintic enemas, such as oil, a solution of sal. marin. or sal. mart. repeated once in a day or two, for five or six times, very seldom fail of destroying them.

The taenia may be destroyed by Fowler's mineral solution; for this purpose the patient should take it, two or three times every day, in as large doses as the stomach will bear; and continue the use of it till the worms are destroyed. Hitherto this remedy has not disappointed me in a single instance.

About seven years ago, a man applied to me, who, for many years, had been afflicted with the taenia, and in consequence of it, with severe convulsive fits; he had consulted physicians in various parts of this Continent, in Europe

rope and the West-Indies, without any apparent advantage, excepting temporary relief. Soon after taking the solution, he voided a piece of the taenia of ten yards, and afterwards another piece of fifteen yards in length, besides a large quantity of shorter pieces, and cucurbitini, or single joints. After the worms were removed, his fits returned occasionally for a year or two, but less frequently than before: I believe that at present they have left him entirely.

Worms of various kinds, and their eggs, must be frequently conveyed with our food into the stomach; there they generally perish: in some few instances, however, they have been known to live and grow; but they have been supposed incapable of propagating, either in the alimentary canal, or any other part of the body. Perhaps the following case may furnish an exception to the general rule.

A woman, of middle age, whose veracity was unquestionable, gave me the following history of her case. Some years before, she had been attacked with a disagreeable, painful sensation in the lumbar region; I presume, from her account of the seat of it, that it was in the kidneys: soon afterwards she suspected that she discharged, with the urine, some  
small



small worms ; a careful attention confirmed her suspicions : the worms, when first voided, kept moving in the urine, and died in about half an hour. A few weeks afterwards she found, that instead of worms, she discharged very small winged insects, all of which, I believe, were dead ; these soon disappeared, and with them all her complaints. Subsequent to that period, the same symptoms had recurred, two or three times every year. She gave me one or two of each kind of these little animals, preserved in spirits. They were, I presume, the same species in different states. The worms were about two thirds as long as the largest maggots found in cheese ; but probably not half so large in circumference. The flies, or gnats, appeared to be about twice as large as the winged aphides, or lice, found on cabbages ; but all of them were so much contracted and changed, by the action of the spirits, that, with the naked eye, I could obtain but a very imperfect idea of them. I deferred examining them with a microscope, hoping to obtain some in a better state of preservation ; but in this I was disappointed ; the woman, finding that no relief was to be expected from medicine, was very unwilling even to think of such a subject, to her, so very disagreeable ; and, in the mean time, those that I had preserved in a phial, by accident were thrown away. I regret very much that  
I could

I could not obtain more particular information respecting them ; it might not, indeed, be of much practical utility, but it would gratify our curiosity to know whether the same species could be found elsewhere ; and if it could, its history might enable us to account, more satisfactorily, for the appearances.

These worms probably proceeded, at least in the first instance, from ovula, which had passed the stomach and lacteals to the kidneys. The ascarides, indeed, sometimes enter the urinary passages from without, and may be supposed capable of penetrating as far as the kidneys ; but to them the salts of the human body are not disagreeable ; to these worms it was otherwise ; it is probable that in water, the element natural to the larva of gnats, they would have lived very well ; but in urine, they suffered, and in half an hour died.

Whether the eggs were all taken in at the same time, their hatching being suspended to different periods, by the powers of the living body ; or whether they were received at different times ; or, in fine, whether those discharged at the several successive periods, were successive generations, propagated within the body, I shall not undertake to determine.

**MEDICAL PAPERS,**

COMMUNICATED TO THE

**MASSACHUSETTS MEDICAL SOCIETY.**

NO. II.—PART II.





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## MEDICAL PAPERS.

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### ARTICLE I.

*Observations on the LYMPHATIC DISTENTION of  
the LOWER EXTREMITIES of Women, while in  
the PUERPERAL STATE.*

GENTLEMEN,

AS I cannot evince my gratitude for the honour you have done me, in electing me an Honorary Fellow of the Massachusetts Medical Society, in any way, which will be more pleasing to you, than in using my best endeavours to promote the object of your united wishes ; I have taken the liberty of laying before you, some observations on the lymphatic distention of the lower extremities of women, while in the puerperal state.

Writers on this disease have imputed it to a variety of causes, some to taking cold, others to a rheumatic affection, and others have had recourse to a dropsical disposition, to help them out in their attempts to account for it : MAURICEAU, has charged it to a reflux of the lochia upon the

## 2 MEDICAL COMMUNICATIONS.

part, and not a few authors have deemed it to be a metastasis lactea. In the cases I have met with, there has been no reason to suspect either of the above causes, the lochial discharge and lacteal secretions particularly, having in all been so perfectly in their natural state, both at the attack, and under the complaint, that I could not think there was a shadow of reason to support an opinion, that either of these had the smallest influence in producing the disease. When I inform you I have had five cases of this disorder under my care, one of them an amiable wife, whose sufferings were both lengthy and severe ; and that to the whole of them I was very attentive, though I fear but of little use ; and if at the same time you will please to recollect in how unsatisfactory a manner it has been hitherto described, how few have accounted for it rationally, or pointed out such methods of relief, as the anxiety and distress it generally occasions, ever lead the Faculty to wish to bestow ; and that hitherto, speedy relief has seldom been obtained ; these considerations, I doubt not, will so far interest your well known candour in my behalf, as, at least, to secure me from censure in having presumed to touch upon a disorder confessedly involved in obscurity, and on which, I fear, I have not been able to throw much additional light ; but as the profession may be benefited in some degree by knowing what has been found useless, as



well as what is useful, in particular diseases, I thought the following remarks might not be wholly without their use.

There is much reason to suppose the sex must have been occasionally subject to this disease in all ages, and in every climate; but I have concluded that it is not a very frequent complaint, from having met with only five cases in nine hundred and eighty nine women I delivered while in business, in which was included every variety of circumstance, which I can any way conceive connected with the obstetric art. The first four cases happened at different seasons of the year and to women, whose circumstances agreed but in few particulars; they had all borne children before, one two, two of them three, and the fourth four children; one was twenty four, another twenty six, a third twenty seven, and the fourth thirty six years of age; in this lying in, which was followed with the disorder I mean to describe, the labour had been natural, and tolerably easy; in all of them the placenta was delivered within half an hour after the child; neither of them lost much blood, had bad after pains, or other unpleasant symptoms. The disorder made its appearance between the second and third week after delivery, at a time when they thought themselves nearly well enough to go abroad, and at a time when they had not been exposed to any error or accident whatever. They were women who had en-

#### 4 MEDICAL COMMUNICATIONS.

joyed good health previous to delivery, and were free from any constitutional complaint ; they all suckled their children, had plenty of milk, and their children were very promising. Two of them complained on the fifteenth, one on the sixteenth, and the other on the nineteenth day, after getting to bed. Stiffness and pain in the upper part of the thigh, accompanied with a sense of lassitude and heaviness, pain in the back, groin, and labium pudendi, and thence downwards through the thigh, leg and foot, were the first symptoms ; swelling soon followed in each of them, and in the course of two or three days the whole left limb was greatly enlarged, hard, exquisitely tender, and immoveable ; a considerable degree of fever, with thirst, restlessness, and loss of appetite, attended. The pain abated in some degree in the course of the first week, but the swelling and lameness continued for near three months. The pain and swelling abated first in the upper part of the thigh where it began, and finally went off in nearly the same direction in which it had come on. They all finally recovered, and have never since had the least return of their disorder, though three of them have had children since. In these cases, which were very tedious to all concerned, I tried all the various topical applications, (blisters excepted) which I then thought could have the least tendency to relieve. Internally I used nitre, antimonials, mercurials,

and bark, as symptoms appeared to require ; but from the most careful attention to the effects produced by both the internal and external remedies, I am not able to say that I think any thing I did was of much service. Opiates for a time would abate the pain and procure rest ; the faltering state of the powers of nature induced me to use the bark with all the patients, and I really thought the irregular remitting fever, which attended the oldest, was abated, her strength supported, and appetite mended by this medicine ; but the disease in the limb was proof against both bark and opium. When they began to recover, I was as much at a loss for a cause of the change, as when they were taken down ; and I believe the discovery of the one, will be the best guide to the other.

In my fifth case, in which I felt myself tenderly interested both as physician and friend, the labour was in the middle of a very cold winter ; it was of the natural kind, but very severe ; the delivery of the placenta was attended with much pain and great flooding, the after pains were very violent, and were followed at the end of the second day, with the most painful hæmorrhoids I had ever known. These however, by anodyne and emollient applications, were but of short continuance ; from their abatement to the end of the eighth day, nothing further occurred worth mentioning ; at this time, my patient appeared in a fair way to do



## 6 MEDICAL COMMUNICATIONS.

well, her appetite was good, bowels regular, she rested well, had plenty of milk, and was daily gaining strength ; appearances however soon began to change, she first complained towards night on the tenth day from delivery, of a sudden sense of weariness, while sitting in an easy chair, accompanied with a sensation in perinæo extending to the middle of the glutæi muscles, like what might have been expected from sitting upon a hard unyielding seat, her pulse soon quickened and she became very thirsty, with a bad taste in the mouth ; she lay down expecting relief from changing her posture ; but in this she was disappointed ; the pains increased very rapidly, and every posture was alike distressing. In eight hours from the attack, the pain had extended up the inside of the pubis, and thence to the inguinal glands, which soon became greatly tumefied and so very painful and tender, as to be incapable of bearing the lightest pressure of the bedclothes ; from these glands the pain in twenty four hours extended down through the thigh in the course of the principal lymphatics to the knee ; from the knee, it still was confined to the lymphatics, and through them passed so rapidly to the toes, as to have disabled the whole limb in thirty six hours. In this stage of the disorder, which I think might without great impropriety be denominated the inflammatory, the pulse was seldom below a hundred and twen-

ty, and very hard ; the whole surface of the body was hot and dry, the heat of the limb was particularly increased, but the colour was as yet unchanged ; frequent discharges from the bowels now took place, and a few hours after a constant vomiting of dark coloured bile. By the use of acedent drinks and an anti-emetic mixture of succus limonum, sal absynthii : and aquæ menthæ the stomach and bowels were quieted ; and by plentiful dilution afterwards, accompanied with nitre and antimonials, the skin was opened, and a plentiful perspiration following, the heat and fever abated. I again examined the limb very carefully, and found neither change of colour nor increased size, but from the hip to the toes such tenderness and stiffness, as rendered it wholly useless ; in two days more, the pain began to abate, but in its place an enlargement at the upper part of the thigh was perceivable ; the swelling extended downwards by degrees, till the third day from its beginning, at which time the whole thigh, leg and foot, were distended in every part to three times their natural size ; the limb had a tense smooth feel, did not retain the impression of the finger, was a little hotter than the other, but had the most remarkable glossy whiteness I had ever before seen in any living subject. On the side of the tibialis anticus muscle, I could discover a slight blush of red, as if a straw dipped in raspberry juice, had been drawn

## 8 MEDICAL COMMUNICATIONS.

from the knee to the top of the foot ; this stripe was remarkably painful to the touch, particularly just below the middle of the muscle where is seated a large lymphatic gland. I endeavoured to contrive an easy posture for the limb, but in this and my expectations that keeping it parallel to the horizon would diminish the swelling, I was equally disappointed. From the size and stiffness of the limb, and weakness of the whole body induced by the preceding fever, pain, and evacuations, she was unable to sit up, or to afford herself the least assistance in bed. The vomiting returned again ; and from the taste in the mouth, the colour and quantity of what was brought up, I was convinced the biliary secretion was greatly increased ; the pulse again quickened, but had lost its hardness ; the skin was soft and moist ; her spirits were much depressed, and every power of nature appeared to falter ; no kind of nourishment could be taken, for every thing offered, either as food or medicine, excited nausea, such things excepted as were of the acescent kind ; oranges, lemons, and cider, alone were grateful, and I allowed them freely ; at the end of two days from the last attack of vomiting, the stomach became quiet, and could bear a little sago with orange juice, and her mind was somewhat more reconciled to her fatiguing lameness ; the limb still, however, retained its size and immobility.



Matters continued in this state for thirty four days with no change of sufficient importance to deserve attention. I now found the swelling beginning to subside at the upper part of the thigh, in the inguinal glands, and by degrees downwards to the foot. That its decline was very slow may be concluded from its having scarcely fallen to its natural size in three months; when the swelling was pretty well reduced, excepting in the foot, which continued much as it had been. At last it began to yield, and in ninety seven days from the attack motion was so far restored to the knee and ankle as to enable her to raise the limb and to place it in different postures, without assistance, but as yet it could not support the weight of the body; by degrees strength was so far restored as to enable her to hobble about the chamber, and in twelve days more she could walk in the street. Being desirous of enjoying a share of the exercise she had long wanted, she was induced to walk about a quarter of a mile; upon the approach of evening she perceived the ankle beginning to swell again, the tenderness and red stripe upon the anterior surface of the leg began to appear, and great were her apprehensions of a return of the disease, but by the immediate application of a blister to the most inflamed part it got better in a few days; and excepting some little uneasiness upon using much exercise, with a little swelling upon keeping the limb long in one

## 10 MEDICAL COMMUNICATIONS.

posture, it appeared to be restored to its natural and healthy state.

I shall now give in one point of view such particulars of my treatment of this tedious disorder, as appear most worthy of notice.

In the first stage of the disease the very great quantities of bile thrown upon the first passages, occasioning violent vomiting and purging, evidently required the first attention. Frequent draughts of chamomile tea to wash the stomach were first administered; and afterward an anti-emetic mixture of succus limonum, sal absinthii, L: L: and aquæ menthæ abated these symptoms. Antimonial and nitrous medicines with dilution brought on perspiration, and abated the heat and great inquietude which had occurred in the first stage of the complaint. Emolient fomentations, gentle frictions, discutient liniments, saturnine washes, lubricating ointments, were all, successively, and frequently used to the limb during the continuance of the swelling, but I am ready to acknowledge, that neither of them appeared to be of the least service: the disease appeared determined, [as the nurse expressed it] to have its course, in opposition to the many exertions I daily made to give relief. The violence of the pain at times demanded anodynes; by their use, I was always able to give a night's rest, without any bad consequences on the following day. As cider agreed better with the stomach than any drink I proposed, I allowed it

freely ; it never gave the least uneasiness, and very evidently prevented the trouble which was constantly threatened from very large quantities of bile thrown upon the stomach. Her diet consisted of sago, gruel, and occasionally a little light meat, with broths, &c. Clysters were frequently injected for the double purpose of keeping the bowels open, and to serve as a fomentation for an enlargement, hardness, and tenderness felt in the vagina, which I doubt not was an over-distended lymphatic gland. As the swelling of the limb subsided, I caused cloths wet with a cold solution of sacch : saturni to be frequently applied, with a view to restore the tone of the lately over-distended fibres ; and as often as the stomach would bear it, I gave the bark with elix : vitriol : allowing her to drink freely of water highly impregnated with fixed air. Increasing appetite, less bile, and more strength, were very evidently the effects of this plan.

For the swelling and return of inflammation in the lymphatic of the leg which were brought on by walking abroad, I applied a blister upon the most inflamed part, being now convinced of the want of efficacy of all remedies hitherto employed. The relief was so sudden and lasting, that I was much inclined to think that had blisters been applied earlier in the disease to different parts of the limb, much suffering would have been prevented, and the cure much sooner completed ; the evi-



dence in favour of this opinion appeared to me so strong, that I made up my mind to try it, should I ever again be consulted in a similar case ; and I would beg leave to submit it to your judgment, whether it might not be advisable to give this application a fair trial, in a disease, acknowledged by all who have seen it, both tedious and vexatious, and which has not as yet yielded, in a short time, to any mode of treatment which has been adopted, and for which, it is generally thought, we are not yet in the possession of an adequate remedy. Perhaps the *blister* may in future be found to be the desideratum we have long wanted.

Many reasons might be adduced in favour of this practice, but as my sole motive in writing this paper, was to lay before the society a few plain facts, I shall leave reasoning upon them, to those who are better qualified to discuss this subject.

But that this disease depends upon an accumulation of lymph in the limb, and that this accumulation is dependent on causes peculiarly connected with the puerperal state, I think may be proved by the most incontestable arguments, and will, I doubt not, readily occur to every member of this society, who will give himself the trouble to reflect on the symptoms, the rise, progress and termination of this very tedious disease.

I can but lament that it has been so little in my power to throw more light on the curative indications and the best method of answering them, than I have done.

## MEDICAL COMMUNICATIONS. 13

If any thing I have said, should be found to have placed the disease in the least useful point of view, to excite the attention of more judicious practitioners to endeavour to investigate its cause, nature and cure, or to support the spirits of those who are either subjects or spectators of it, it will afford me great pleasure. Some consolation arises from the considerations that this disease has seldom been known to prove fatal; and that although as yet, it cannot be immediately relieved by art, nature generally struggles through the trying conflict, and has so far as either my reading or observation has extended, generally come off completely victorious.

I am, with great respect and esteem for the members of the Massachusetts Medical Society,

Gentlemen,

Your obliged

And most humble servant,

EDWARD WYER.

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### ARTICLE II.

*The History of a RETROVERTED UTERUS. By*  
EDWARD AUGUSTUS HOLYOKE M. D.

MRS. ——— the subject of the following case is about twenty five or twenty six years of age; of a constitution rather delicate; has born two children, and since her last delivery has been

#### 14 MEDICAL COMMUNICATIONS.

troubled with a *procidencia vaginæ*. On Saturday, June 5th, this lady was very much frightened by her sister, who with great terror and precipitation informed her that one of her neighbours was just then violently kicked by a horse. Immediately she felt "something inside of her turn over," as she expressed it, and instantly became very faint. She continued to have faint turns several times in a day for the following week, attended with frequent solicitations to discharge her urine, which she voided with difficulty ; and likewise a violent forcing when she had a stool, resembling, as she said, that which takes place in dysentery.

On the night of the next Saturday, June 12th, attempting to make water, she found she could not pass a drop, and the attempt was attended with severe pain. During the night and the next morning she was very restless, and towards noon she sent for me. I found her in great agony and anxiety, very faint, with a frequent and rather full pulse, her skin hot, and countenance very red and flushed. She complained of violent pains in the uterine and lumbar regions, and of a great desire to make water, while she had an inability to void it, and a frequent tenesmus.

These complaints she supposed to be occasioned by a "womb-colic." Having informed myself of the particulars above related, it immediately occurred to me that this was probably a case of *retroverted uterus*. Without however mentioning



my suspicions, I took from her arm twelve or fourteen ounces of blood ; ordered her to drink freely of linseed tea, and to take of a mixture, in which the principal ingredient was ol : ricini, until it should produce some purgative effect.

Monday morning, June 14th, I found her rather better than I expected ; but she had not had any stool, although she had taken two ounces of the oil ; nor had she passed any urine voluntarily, though now and then upon moving or turning in the bed, enough of it ran from her, to afford her a great deal of ease. I now ordered an infusion of senna. In the evening I found that her bowels had been tolerably well evacuated, and that she had at several times passed a considerable quantity of urine involuntarily. By these discharges she was considerably relieved. I directed an opiate for the night.

Tuesday morning, June 15th, she had passed a pretty tolerable night. But the fulness of the abdomen had now much increased, and she had become very restless, complained of great distress, and was at intervals very faint. I now hinted to her my suspicions and informed her of the nature and danger of the case, so far as was necessary in order to obtain leave to satisfy myself by an examination. Her anxiety induced her to consent to this measure with great readiness. Upon examining in the vagina I found the *os uteri* turned high up against the *os pubis*, and the *uterus* like a

## 16 MEDICAL COMMUNICATIONS.

hard tumor filling the back part of the *vagina*. Upon introducing a finger into the *rectum* as soon as I had passed it beyond the *sphincter*, a tumor presented itself filling the hinder part of the *pelvis*, and pressing the *rectum* hard against the *os coccygis*. These appearances exactly corresponded with the account given of the *retroverted uterus* in the 4th and 5th volumes of the medical observations and enquiries.

I informed my patient that the case was now reduced to a certainty ; that I would take off the water by a catheter and then attempt to reduce the displaced *uterus*. I placed her in a proper situation, and endeavoured to pass the catheter ; but in doing it I met with an obstruction from the pressure of the *uterus* upon the *urethra* against the *os pubis* : which however was easily removed by pressing the *uterus* back with two fingers, upon which the urine immediately gushed from her and the catheter passed on to the bladder with the utmost ease. I drew off about two quarts of water, which gave her instant relief. I now caused her to kneel on a pillow placed upon the foot of the bed, and directing her to lay her head and shoulders as low as possible, I introduced my left fore-finger into the *vagina*, and the right into the *anus*, and attempted with the first to pull down the *os uteri*, and with the other to push up the *fundus*. Not succeeding in this attempt, I introduced two fingers into each orifice

## MEDICAL COMMUNICATIONS. 17

and made similar efforts. The patient made great complaint of pain upon the introduction of a second finger *per anum*, and my attempts increased that pain to a great degree. I therefore desisted after some little trial, regretting that I had made any till after the bowels had been more thoroughly emptied. These attempts were made about noon. The ease procured by the catheter continued all the afternoon. In the evening I prescribed an anodyne, and directed an infusion of senna to be taken early the next morning, and as little food as possible during the next day.

Wednesday morning, 16th, she had rested tolerably well, but had passed no urine. She had taken the infusion as directed, but it had not yet operated. I left her with the intention to see her again in the afternoon, but before the time for my visit I was called to her in haste. I found her in great distress; she had not passed any urine, except a little involuntarily, had had a copious ejection in consequence of the senna, and had not taken any food during the day except a little thin gruel in the morning. The pains were now excessive, especially in the *os sacrum*.

As the bowels were now well emptied it seemed a convenient opportunity to attempt the reduction. About five o'clock therefore I drew off nearly two pints of urine which immediately relieved her as before. I then placed a board on the foot of the bed and three pillows upon it; upon



## 18 MEDICAL COMMUNICATIONS.

which she kneeled while her head and shoulders were placed as low as possible. I then attempted the reduction as the day before, and continued my endeavours for some time, especially *in ano*, for I found my efforts to pull down the *os uteri* were of very little consequence. In about three or four minutes however I found the *fundus uteri* give way before the fingers in the *rectum* while the *os uteri* turned down to the *os externum*, upon which my patient experienced immediate relief. She was then placed in bed, and made but little complaint. Her urine was passed voluntarily that evening.

Thursday morning, 17th ; she had slept well, and passed her urine twice in the night. She still complained of some soreness and of considerable weakness in the parts. These complaints continued for three or four days ; she however mended daily, and on the first of July following was in her usual health, without any threatening of abortion and able to attend to her family affairs as usual.

About the 12th of November following, I delivered her of a healthy, well grown boy, without any disagreeable accident.

ARTICLE III.

*Account of the effect of a THREAD round a CHILD'S NECK. By JOHN BARTLETT, of Roxbury.*

DEAR SIR,

THE singularity of the following case, I hope will afford apology for offering it, through you, to the Medical Society.

On the 7th of May, 1788, I was asked to visit a child two years and an half old, who had a tumour as hard and incompressible as bone, completely encircling his throat. I searched for the cause of this tumour, with as much care and attention as possible ; not suspecting from its appearance what the event shewed it to be afterwards. As scrophula I treated it for ten days without success, or the least apparent alteration. When inspecting it, on the eight day of June, I discovered a sinus, into which I introduced a director, and with my knife in its groove, carried it quite around the tumour. Upon the exposure of the muscular fibres, they appeared to be totally void of elasticity, as pale as though the body was inanimate, and neither pain nor hæmorrhage took place. I applied the pulv. cort. rub. aqua minthæ, that a discharge of laudable pus might

## 20 MEDICAL COMMUNICATIONS.

be brought on, if possible. On the 10th, a rigidity of the masseter muscles was evident, a diarrhoea set in, with a prodigious prostration of strength, an inability of swallowing solids, and a difficulty in fluids. I had immediate recourse to the bark, wine, and opium, as the only means of rescuing the patient from death. He took in the first twenty four hours, two drachms of the best red bark, four grains of opium, as much wine as he could take ; frequent nourishing clysters, and a cordial diet were administered. On the morning of the 11th, I discovered the cause of this astonishing disease, which was a thread that had probably been worn from infancy, and in consequence of an uncommon shortness of the neck, which lay in folds, and from the very great carelessness of its parents had been left undiscovered, whilst from the natural growth of the parts it was gradually and imperceptibly buried in the adipose membrane and lodged itself upon the trachea, and the mastoid and flexor muscles ; so tight was this ligature that upon its division the ends retracted an inch and an half by accurate measurement. I now thought it probable that the cause would cease to act ; but was disappointed. From the 11th to the 15th the disease rapidly advanced under the above prescriptions, and on the 16th his jaws were so close, as rendered it impossible to introduce a spoon betwixt his teeth. I was now at a loss whether to con-



tinue the tonic applications or to reverse the plan. I consulted several of the faculty, and all agreed, that to desist from tonics, must prove fatal, by diminishing the excitement of the vessels.

On the 20th, a partial relaxation came on, and on the 24th was complete, and the wound was entirely healed. The diarrhœa was checked. The nervous system quieted, the appetite for food returned. And the only complaint remaining was an incapacity of eating as much as nature demanded, owing to the contracted state of the stomach from a want of solid food. But from the length of his disease, impeded respiration, and weak constitution, ulcers had begun to be formed upon his lungs, and a constant cough, dry skin, hectic heats, and night sweats put a period to his existence on the 4th of July. I obtained liberty to open the body. When the cavity of the thorax was exposed to view, my first discovery was the pericardium distended with water to a monstrous size, compressing the lungs into a much smaller space than is naturally allotted them for their action. One lobe was nearly two thirds wasted by disease, the other but little altered from its common appearance. I then passed on to the abdominal viscera. The stomach was much reduced as to its size ; to the touch it appeared as a solid mass, was incapable of containing more than a common wine glass, and was as clean as if it had been drenched in water. The

22 MEDICAL COMMUNICATIONS.

liver was much beyond its natural size ; but the other viscera appeared in a healthy state.

I am, dear Sir, yours, &c.

JOHN BARTLETT.

*Dr. John Warren.*

Roxbury, 1807.



ARTICLE IV.

*An Account of an EXTRAVASATED TUMOUR on  
the LABIUM PUDENDI, soon after Delivery.  
By the late Dr. OSGOOD of Andover.*

GENTLEMEN,

I TAKE the liberty to transmit to you the history of a case, frightfully alarming in its appearance, but which terminated happily. In the course of forty year's practice, which has been particularly extensive in attention to women in labour and the consequences of labours, I never met with a similar case nor ever read of one till I met with the cases related by Dr. Macbride in the 5th volume of the London Medical Observations.

March 9th, A. B. about 20 years of age, was delivered by Dr. — of her first child. The labour was natural and easy, the child not exceeding five pounds. The doctor stayed the usual time, and when he left her, supposed her in a

very good way. But in two hours they requested his return immediately. He accordingly visited her, and found her in great distress, and upon examination discovered the left labium greatly swoln, but from what cause he could not imagine, knowing that she had not suffered any great unusual distress. Not being able to ascertain the nature or cause of her difficulties he sent for me. I visited her the next morning with him, and having examined the parts, we found the left labium distended back to the perinæum, to the size of a child's head. I immediately recollected the two cases related by Dr. Macbride and concluded this must be similar, and arose from the bursting of a blood vessel. From the favourable issue of the cases he related, I encouraged the woman and her friends, and recommended warm stupes, and a patient waiting the issue of so alarming a case. In three days the teguments burst and gave a free discharge to the contents, which was coagulated blood. The opening was large and gave a fair opportunity to have the cavity cleansed, which was effected by detergent injections. By the use of the bark and other restoratives, the parts healed, and she was soon restored to her usual health.

JOSEPH OSGOOD.

*Andover, 19th June.*

To the Mass. Medical Society.



## ARTICLE V.

*History of an HÆMORRHAGE from a RUPTURE of the inside of the LEFT LABIUM PUDENDI. By the late Dr. NATHANIEL W. APPLETON.*

GENTLEMEN,

IN 5th volume of Medical Observations and Enquiries, by a society of Physicians in London, two cases are related of the rupture of the blood vessels near the vagina, producing monstrous swellings in the labia pudendi and perinæum, happening after delivery. And Dr. Osgood of Andover has communicated to this society a similar case occurring in his practice.

On 5th February, the weather being excessive cold, I was called to a labouring woman of about 40 years of age. Upon entering the room, I found the patient apparently dying; no pulse to be discovered in one wrist, and scarcely perceptible in the other. Cold sweats extended over the whole surface of her body, and she was speechless. The by-standers said that she had been flooding all the morning. I was fearful that the scene of life was near closing; however I directed some warm red wine to be given repeatedly in small doses; and as I was then attending a woman in travail, was obliged to leave her; upon my

return in about an hour, I found the woman recovering, her flesh growing warm, and her pulse returned. I then directed gruel with wine to be given often, administered an opiate, and again left my patient; returning in a few hours, I found her better and the flooding much abated. Upon enquiry, she told me that she had strained herself the day before, in carrying a tub of water up stairs; that she felt no inconvenience from it at bed time; but in the morning was surprised to find herself flowing immoderately; it not being a fortnight since her catamenia, and added that something uncommon was the matter with her, as she had a very large swelling near the pudenda. I at first imagined an hernia had taken place; but upon examination under the clothes the cases above referred to occurred to my mind, and upon an inspection of the parts, I found a large discoloured tumour which had the appearance of a mortification. A fissure of the skin on the inside the left labium and a large piece of coagulated blood lying at the orifice, this readily came away, a very trifling hæmorrhage ensued; the parts were fomented with warm baths, the bowels opened, and the patient kept still, she gradually recovered, the swelling subsided, the wound healed, and in ten days she was again at her work.

Although similar cases probably do not often occur, yet it may be of practical utility to know that they sometimes do. The cases above refer-

26 MEDICAL COMMUNICATIONS.

red to as happening after delivery do not mention any hæmorrhage. But in the case which I have now communicated it was very considerable and probably produced such a deliquium as might have terminated in death, had not timely assistance been given.

I am, Gentlemen, respectfully,

Your humble servant,

NATHANIEL W. APPLETON.



ARTICLE VI.

*Case of TETANUS, from the puncture of a TENDON in the foot ; cured by amputation, by Dr. JOSIAH BARTLETT, of Charlestown.*

IN the afternoon of August 31, 1793, I was called to Mr. John Goodwin aged 23, of a good constitution ; by trade a carpenter. He had been unwell three days ; the symptoms were alternate chills and flushes, a great prostration of strength, sickness and oppression at the stomach, a stiffness in the neck and cheeks, thirst, and a foul yellow tongue. I directed an emetic, and was coming away, when he cursorily observed, that he had hurt his foot sometime before. By the operation of the vomit, a large quantity of bile and acrimony was evacuated. About nine o'clock in the evening I was again called, and found him vio-



lently affected with spasms, commencing in his lower extremities, extending sometimes to the hips only, at others up the spine, to the neck, jaws, and adjacent parts, at which times the head was drawn backwards. He had a low irritable pulse, a weight upon the *scrobiculus cordis*, and what is called the *hippocratic countenance*. These alarming symptoms led to a particular enquiry respecting the injury in the foot ; when I found that twelve days before, he had run a nail into the base of the little toe, on the right foot, which he said penetrated three fourths of an inch. The parts were tender several days, and he had only applied the rind of pork. Convinced that his complaint was a tetanus, I gave 40 drops of liquid laudanum, and mentioned my suspicions. Doctors Danforth and Warren were immediately called, and they confirmed my opinion. After a full discussion, a removal of the wounded part was determined on, as most probable to obviate a fatal event ; and with a perfect acquiescence on the part of the patient, an operation was performed at midnight. The amputation was made upon the metatarsal bone, about two thirds of an inch from its inferior extremity ; and it appeared from an examination of the toe, that the nail had passed obliquely into the exterior tendon where there was a slight discolouration. The stump was dressed superficially, and he took 40 drops more of laudanum.

Sept. 1. He slept about three hours in the course of the night, had a better countenance, but was frequently affected with slight spasms, and the pulse was feeble and tremulous. In the forenoon he puked several times (which he attributed to the use of wine) and had several flatulent discharges by the bowels. 40 drops of laudanum were given him at noon. In the evening he complained of a stricture upon the neck of the bladder, and a retention of urine; but these complaints were relieved by fomenting the abdomen.

2d. He slept tolerably well the last night, but was frequently affected with startings. The pulse was less irritable, but he was again troubled with urinary obstructions, and felt a severe pain in the hips, back and præcordia. The laudanum was repeated, and an onion poultice applied over the os pubis, which relieved him. A bread poultice was put to the foot, to loosen the dressings and promote suppuration.

3d. He had a good night; the pulse less irritable, but quicker, with chills, a dryness of the skin, and a continuation of pain in the parts which had been affected with spasms. In the course of the day, he took several doses of elixir of camphor with snake-root tea; had a discharge from the bowels and passed urine freely.

4th. He slept comfortably the past night, the pulse was soft and regular, but he complained of a soreness in the hips and back, and had several

small discharges from the bowels. Dressed the stump, which had began to suppurate, and at evening gave 30 drops of laudanum.

5th. He slept well as usual, had no fever, the soreness had abated ; but the diarrhæa continued with pain, griping and flatulencies four days, during which time, he was twice purged with rhubarb, occasionally quieted with anodynes, and began the use of the peruvian bark.

9th. His appetite good, the first passages regular, and he had no other complaint than debility. The stump healing, and his recovery progressing rapidly.

The diet during his illness was of the restorative kind, consisting of gruels, broths, the juices of roasted, or boiled meats, with wine, brandy, &c. as his inclination directed.

I shall only add, that the gentlemen in consultation, were positive in their opinion of the disease ; and that the leading symptoms exactly corresponded with several cases of *tetanus*, which to my knowledge have arisen from wounded tendons, and terminated in death.

*Charlestown, Sep. 20, 1807.*



*A Remarkable extra UTERINE Case. By Dr.  
GEORGE OSGOOD, of Andover.*

*To the Corresponding Secretary of the Massachusetts Medical Society.*

I TAKE the freedom to transmit to you the history of a case attended with such peculiar distresses, and of a nature so rare and extraordinary, that in my opinion it ought to be preserved : and if you think best, to be made public.

A. B. of a lax and irritable habit, was married at twenty-two years of age, from which time to the expiration of two years she had two children. From the weakness of her constitution she suffered more than usual during the months of gestation, and remained both times in a weak state for two months after delivery, and was able to give suck to her children not more than five months. In the 25th year of her age, in October, 1784, she became pregnant a third time. She had no complaints in November and December but such as she had been accustomed to during the weeks of conception ; but in January, 1785, she complained of an unusual lameness in and about the loins, and particularly the left hip. This lameness gave her but little apprehension of evil, and she made no application to me till the 13th of February, when she was attacked with those pains which usually

precede an abortion. Having inquired what had befel her the preceding day (for it was evening when I was called) I was informed that she had walked hastily on the ice, and that she had been greatly alarmed by the news that two of her neighbours were thought to be dying. I supposed that these causes were sufficient with her to produce a miscarriage, unless prevented by the assistance of art. I immediately opened a vein, and, after plentiful bleeding, ordered her rest and gave her freely of opiates. These had the desired effect; and the next morning she had no complaints that threatened an abortion, but her lameness was much increased, and she complained of pain in her left side just below the short ribs, and extended to her stomach, together with some uneasiness. I recommended rest and gave her sedatives and antispasmodics.

The 20th of February, she was suddenly seized with pains in her stomach and side: I again had recourse to venesection, and gave opiates with sal succin: and after extreme pain for six hours, she fell into a swoon. Such paroxysms of distress recurred often, nor was she a day free from pain and uneasiness in her left side, frequently accompanied with excessive vomitings, and fever with costiveness. I endeavoured to give remedies according to the nature of her complaints, mild ecoprotics, antiphlogistics, and sedatives. Such were her complaints till the 13th of March, when

suddenly, without pain preceding (for her pains were generally severe before her vomitings) she vomited nearly half a pint of pus, without any warning, nor was there any mixture of food with it, though she had breakfasted but a few minutes before. Her distress was extreme immediately upon this discharge, beyond every thing she had experienced before, and accompanied with a sudden and great debility ; indeed it appeared that now the period of her sufferings was arrived, and that death would shortly close the scene. But Heaven ordained otherwise, and she was to live, to give an example how great sufferings a feeble constitution can bear. She continued to vomit through the day, though very languid, and the remaining discharges from her stomach had some sprays of pus and blood. The next day she was free from pain, but her soreness and languor were great : sore mouth, and other symptoms of a depraved state of the juices appeared ; and an unnatural heat with a weak and quick pulse gave me much uneasiness, especially as the pain in the left side returned, but not with that severity as before the purulent discharge. But there was a sensible enlargement just below the short ribs, greater than we could suppose was occasioned by the foetus, so early in pregnancy, though the motion of the foetus was sensibly perceived by the patient, and I could plainly distinguish its motions by applying my hand on the left side of the abdomen. The



pain, sore mouth, and fever, continued till the 13th of April, when she was attacked with nausea, but did not vomit; but a diarrhœa followed her for that day with appearances of pus mixt with the fæces. I consulted Drs. Baylies and Perry, and we fully believed that the diarrhœa was occasioned by the discharge of another abscess, as the pains in the side abated and she continued free from extreme distress the remainder of April and till the latter part of May; during which time her appetite returned, and she gained as much strength as to sit in her chair an hour at a time, though she could not stand erect nor walk without assistance, nor could she lay on her right side, and was almost every day attended with a difficulty of respiration which lasted from one to two hours, which I considered as an hysteric affection of the lungs, as she generally found relief by foetid and carminative remedies. But as my patient was much better, and the month of June was near, we hoped that at the expiration of her pregnancy her trials would be at an end; but the month of June seemed but the beginning of her trials, for she was then confined to a bed of pain and distress, cramps and convulsions, and was never off it till the last of October. The first of June she was attacked with severe pain in her left side, and just below the sternum, accompanied with vomitings and spurious pains, resembling parturition pains, and continued every day, though not equally severe,

till the 20th of June, when her pains were such as usually attend labour, or rather were grinding pains not any wise forcing, but they continued fourteen hours very regular and severe; I frequently examined her vagina, but could make no discovery that labour was approaching. But as she had repeatedly, for twenty days, had pains similar to no purpose, and I had given opiates, I was determined to let her pains go on and only support nature, till nature being exhausted the pains almost ceased, and I then gave an opiate. She had no more pains from that time that gave me any encouragement that she would be delivered. The 24th she informed me that the last night she had no rest nor pain, but was much convulsed through the night, and said that her child was dead: I endeavoured to persuade her out of that opinion, as the want of motion for a few hours could not be an infallible symptom of the death of the foetus; but she was not to be persuaded: I was however in a few days convinced that it was really the case, as no motion from that time was perceivable; and her breasts which had been turgid became flabby, and she was attacked with faintness, which continued an hour notwithstanding a free admission of air, and a free use of vinegar, volatiles and cordials. This faintness returned every day for three weeks, and lasted nearly the same time, and it appeared sometimes as if she would fall into a total deliqui-

um. When she was not faint she was a great part of the time in great distress, and the abdomen for sometime appeared rather to increase than lessen ; but whether the enlargement was occasioned by flatulencies in the intestines, or was in consequence of the death of the fœtus, I could not determine. The 20th of July she was attacked with a uterine hæmorrhage, which was moderate and accompanied with bits of a fleshy substance, which I then considered as parts of the placenta ; and as she had some slight pains in the region of the uterus, I once more hoped that a delivery might be effected, especially as the os tincæ was a little dilated. This discharge continuing for several days, with the above appearances, and no fœtor attending them, nor any further enlargement of the os tincæ, nor any pains that might be considered as parturition pains, I began to think seriously that the fœtus was not in the uterus. I wrote to Dr. Appleton, of Boston, to my honoured father at Andover, and called in the advice of Dr. Baylies, they all agreed that the fœtus was not in the uterus ; and as palliatives and a supporting diet was what I had recommended for a long time, they advised the continuance of the same course.

On the 28th of July she was attacked with a distressing cramp, which was severe beyond description ; the paroxysms continuing from four to eight hours, accompanied with severe convulsions. The paroxysms at first were not very



### 36 MEDICAL COMMUNICATIONS.

frequent; but the latter part of August and the month of September they returned almost every day, and nothing but opium and the warm bath, with frictions, gave any relief: musk, amber, and foetid gums were tried to no purpose; and finally she was obliged to take twenty grains of opium in a day. Her disorder was so violent as to produce all the varieties of tetanos, emprosthanos, opisthotanos, &c. and every muscle was, in turn, affected. Such was the severity of this disorder, that it appeared as if every paroxysm would put a period to her existence. But as the cold weather advanced, and the size of the abdomen lessened, these severe spasms abated; and after the 5th of October she had no paroxysms of the cramp; but flatulencies of the bowels prevailed; and, as there appeared some better prospects, I sought for some effectual means for their removal: and having lately read the history of Mrs. Low in the American Magazine printed in Boston, for 1746, and found that great benefit accrued to her from the application of the emplastrum e cymini to the whole abdominal region, I made the same application, and it afforded her relief beyond my expectations. Such for four months past had been the weakness of her digestive powers, that no solid food could be taken without exciting immediate distress; but by the middle of October she could receive an animal diet, so that by the first of December she rode

out, and in January, 1786, had a return of her menses, which were regular till January, 1788, when she became pregnant, and at the expiration of nine months was delivered of a well-grown healthy child. During this last pregnancy and labour she was as well as she ever had been when pregnant or at the time of delivery. Before her last pregnancy the tumour occasioned by the foetus was about the size of the head of a nine-month foetus, laying to the left of the umbilicalis extending downward to the pubes. But the first fortnight after her last delivery the tumour was mostly upon her right side, but is now, when standing, directly over the pubes. From these motions it was conjectured that the foetus was originally in the left fallopian tube, but that the tube was burst.

She was delivered of a son in November, 1790, and another son in July, 1793, and of a daughter in January, 1796; during which time her health was better than I should have expected, nor did the tumour in her left side during her pregnancies cause greater uneasiness than in her pregnancy of 1788; nor were her sufferings greater in these several labours than was common in her labours before the tumour in 1785. After the birth of the daughter in 1796, her strength did not return as usual, and her debility was increased by an abortion the latter part of December of the same year. She had abortions every year from that time

till the present year 1802, when, on the 17th of January, she was delivered of a healthy daughter. The first months of this last pregnancy her complaints were not more than she had commonly experienced in the early stages of pregnancy. She rode several short journies, and attended to her domestic concerns. About the fifth month, as the enlargement of the uterus pushed the tumour out of the pelvis, the pain and soreness was very distressing, much more than in any preceding pregnancy (except the pregnancy, the supposed cause of the tumour in 1784 and 1785.) The uneasiness was confined to the left side, and in the place of the tumour, and every motion from within and without was distressing. These complaints lessened after the seventh month, but the general complaints of a gravid uterus were very distressing, and for two months before the birth of the child she was frequently afflicted with pains, that gave apprehensions of immediate labour. On the evening of the 16th January, labour commenced by the breaking of the membranes, but the pains were not very considerable till the morning of the 17th, when her pains, or rather distress, was constant and continued without cessation for four hours, and she was then delivered of a full-grown healthy daughter. The hæmorrhage nor pains were so great after labour as she had been accustomed to, and she had no unusual complaints till the evening of the 19th, when she discharged sev-



eral large grumous clots, then slept and awoke at four o'clock of the 20th with universal distress, and a long continued rigour, which was followed with great heat. By the timely use of sedative and antiphlogistic medicines the violent symptoms abated; but alternate chills and heat, with a tense abdomen, continued. The lochia in common quantity, and the milk appeared at the usual time, but not in usual quantity; and by the sixth day the milk was very trifling, and soon ceased. The left side of the abdomen was much enlarged and the pain and soreness distressing. The latter part of January an aphthæ appeared, and the singultus was distressing. These complaints for a few days were alarming, and threatened immediate dissolution. The 10th of February the heat abated, the aphthæ and hiccups much lessened, and her appetite better; but her strength not increased, and the rigours and paroxysms of fever were as before. February 15th she had several stools, (the first from January 17th without an enema or cathartic) and symptoms no worse till the evening, when the discharges became frequent, and, instead of fæces, uniform pus, which was extremely fœtid, and continued till 10 o'clock of the 16th, when great debility was induced, and I momentarily expected a period to her sufferings and life. After several hours of extreme languor she revived, the tumours lessened, and by the 20th she was recruited to nearly the same strength as

before the purulent discharges; the quantity of pus evacuated from the 15th to the 20th was estimated at three pints. From this time it accompanied almost every discharge of fæces, and frequently the discharges were only pus, and very offensive: her bowels were no longer constipated, her appetite better, but by no means regular; and, at all times she complained of an indescribable nauseous taste. From the first of the aphthæ she frequently vomited, and the ptyalism for three weeks was very great; nor did an aphthous state of the fæces leave her. The latter part of April she was able to sit in her chair, and with assistance walked; but her feet swelled, and her appetite lessened. May 4th and 5th, the weather being very warm, she vomited almost every thing she took, which continued till the 13th, then ceased, sore mouth came on and delirium, and she expired on the 22d.

On the 23d, Doctors Bricket, Kittredge and Pearson were called to dissect and examine the tumour, which had afflicted her for more than seventeen years, and which I supposed the cause of her death. She being a near friend I was not present at the dissection. They informed me, that the tumour extended from the navel, lying on the left side and into the pelvis. They found the uterus in a sound state as was the right fallopian tube: the left fallopian tube was very greatly enlarged and entire, and they took therefrom the bones of a

full-grown fœtus.\* The tube adhered to the peritonæum from the upper edge of the os ilium for some considerable distance above. It also adhered to the colon, where there was an aperture, which was the outlet of the pus, which continued to discharge from the 15th February till her death. The tube had thickened with its enlargement and was found to be nearly half an inch in thickness; the bones of the fœtus had nearly perforated the tube in several places. The ovarium and fimbriæ were obliterated.

If the above history of so gloomy and distressing a case can be useful, I shall think my time and attention not misemployed.

January, 1802. GEORGE OSGOOD.



*The following is an Abstract of the Case referred to in the preceding Paper.*

Mrs. Low had been the widow of Thomas Harridin, of Gloucester, by whom she had one child October 6, 1728; and on the 30th October, 1730, she was again taken in travail, but after the usual time of labour expired, her travail-pains ceased, and returned no more. She continued the following winter very big, and in May, 1731, went to Boston for help, had a plaister laid all

\* These bones are now in the possession of the Society.



## 42 MEDICAL COMMUNICATIONS.

over the abdomen ; soon after this her bigness was reduced, the child only remained in her (as she expressed it) very hard. There was no other sensible evacuation than a large foetid perspiration which made her very weak, and the room extremely offensive ; but gradually her strength was restored, and April 22, 1732, she had another child ; in the month of March following her husband died. After a widowhood of more than three years and a half, on the 18th November, 1736, she married Mr. Joseph Low, of Gloucester, by whom she had five living well-grown children, the last of whom was born March 5, 1745 : five days after this birth she was taken with fever ; a plaister was applied to her navel, internal medicines were administered, and in about fourteen days her fever abated, the plaister was removed from the navel, in which there was an orifice from whence matter began to be discharged. On the 28th of April she was brought to Newbury for advice : at this time there was another opening into the abdomen ; about  $\frac{1}{8}$  of an inch below the former, and a substance in the abdomen, as hard as a stone, and about the bigness of a large quart bottle, and something of that form, was felt, the centre of which was in the umbilical region, through these orifices pus was daily discharged to the amount of nearly half a pound till about the middle of May, when the cranium of the foetus was perceived, on the 9th June by opening be-

tween the two orifices the position of the cranium was discovered. On the 20th some small bones were extracted which were laying across one another much entangled. On the 24th, in presence of the Rev. JOHN LOWELL and the Doctor's two sons an incision was made, and the rest of the bones were extracted daily till the 28th, when the last was taken away and the wound stitched up. On the 2d July she expired, and on the same day upon dissection it was found, that the foetus had lain in the left fallopian tube, which was much distended and adhered fast to the peritonæum ; but clear of bones and all other matter, the right fallopian tube, ovarium and womb in perfect form and soundness. The right lobe of the lungs considerably discoloured, knotted and wasted, and the left lobe entirely consumed except the vessels and membrane, which all adhered fast to the pleura and were not separable but with a knife ; the rest of the viscera sound and in good order.

Thus it seems that the foetus had lain in the tube for sixteen years ; during this time she had six children.

## ARTICLE VIII.

*Case of STRANGULATED CRURAL HERNIA, operated on according to the method of DON ANTONIO GIMBERNAT, with some observations on the treatment of HERNIA. By JOHN C. WARREN.*

Read at the meeting of the Counsellors on the 4th June, 1807.

*To the Counsellors of the Massachusetts Medical Society.*

GENTLEMEN,

THE operation for the relief of STRANGULATED CRURAL HERNIA has been formidable to good surgeons, because not well understood. MR. POTT speaks of it with apprehension ; and the method of performing it proposed by MR. BENJAMIN BELL seems so inadequate, that it must have been a difficult affair under his hands. An accurate investigation of the anatomy of the parts concerned in it has removed those difficulties, and dispelled those apprehensions. It may now be considered comparatively safe by the surgeon, who is acquainted with the works of GIMBERNAT and HEY, and the admirable production of MR. ASTLEY COOPER, and who is also practically versed in the anatomy of the parts. As this operation has not been practised here till lately, I



have taken the liberty of laying a case of it before you, with the hope of its exciting attention to this subject.

CASE.

Mrs. C——, a lady residing fifty miles from Boston, had been affected with crural hernia sixteen years. On the 28th of January, 1807, from a slight cause, she was attacked with the symptoms of strangulation, which continued with increasing violence till the 4th of February, when I saw her. A small, quick, and weak pulse, tense abdomen, constant vomiting, and great tenderness of the diseased part indicated, that no time should be lost. Such efforts for the reduction by the taxis were made, as the sensibility of the part allowed; and, these proving ineffectual, the operation was decided on by us, and assented to by the patient.

The tumour was three inches long, and two wide; extending in the direction of the crural arch. Mrs. C—— being placed on a table three feet and an half high, the legs hanging over the end of it; an incision, four inches long, was made across the hernia, at the termination of its inner third. This exposed the fascia, very thin, and requiring cautious dissection; after which the hernial sac appeared, and was opened at its lower part without appearance of water. When the sac was dilated, a dark coloured and apparently disorganized mass was seen; and it was not without

frequent turning and examination, that it could be ascertained to be a ball of omentum enclosing a portion of intestine, which closely adhered together. These were separated with some hazard ; for the adhesion was so firm, the parts so absolutely of the same colour, and the intestine so closely invested on all sides by the omentum, that a momentary inadvertence might have allowed the intestine to be opened. Small portions of omentum were left on the intestine, rather than to incur an unnecessary risk in separating them. The intestine was then examined. Although it was very livid, yet as it possessed sensibility fully sufficient to prove the existence of life, an attempt was made to return it ; but the stricture was much too narrow to suffer this to succeed. The obstruction, which first presented, was formed by the *falciform process* of MR. BURNS.\* When this was cut, the finger passed higher up to a stricture, produced by the internal edge of the crural arch, and the third insertion of the external oblique muscle. The tip only of the finger could be pushed into this stricture, by using a force somewhat greater than one would employ without its being indispensable. Then, the intestine being retained on the back of the finger, the curved bistoury was insinuated on the fore part ; the insertion of the external oblique cut toward the pubis ; and, the knife being withdrawn, the fin-

\* See the Edinburgh Medical and Surgical Journal for July, 1806.

ger passed into the abdomen. The intestine was then returned ; but the omentum being enlarged, hardened, and conglomerated, a portion eight inches long was cut off, and a small ligature passed through the remainder, to retain the bleeding vessels at the mouth of the sac. Three ligatures were made through the skin, the wound was dressed with adhesive plaster, firm compresses, and bandage, and the patient laid in a state of ease and tranquillity, compared to that before the operation.

In two or three days some increased tension of the abdomen succeeded, and was relieved by the applications of the attending physician, Dr. S——. No other accidents occurred, and Mrs. C—— recovered a state of more perfect health than before ; which she has since continued to enjoy.

OBSERVATIONS ON THE TREATMENT OF HERNIA.

As the improved modes of practice, founded on the valuable observations of the celebrated Mr. CLINE, and on those of Mr. COOPER and Mr. HEY, are not yet generally diffused, I beg the favour of being allowed to add to the above detail some remarks on the treatment of hernia.

The Spanish surgeon GIMBERNAT tells us, it has been computed, that an eighth part of the human species is affected with hernia. So little attention has been paid to this disorder, that it is difficult to form an opinion of the proportion in



this country. It probably does not exceed one in fifty. Many suffer without suspecting it, especially females; numbers of whom, affected with a small, almost imperceptible tumour in the groin, are little aware that it constitutes a derangement, which, if neglected, may produce a painful disease and death. It is here well known, that females, supposed to be affected with *bilious colic*, have often concealed the existence of an abdominal tumour till too late, and perished miserably from a *strangulated hernia*.

The hernia, to which our attention is most commonly solicited, is the *inguinal hernia of males* in a state of strangulation. The treatment of it differs from that formerly employed. The old practices of raising the patient and shaking him by the heels, of using violent pressure to reduce the tumour, and of administering powerful cathartics, are now known to be unavailing, dangerous, and fatal. Correct anatomical and pathological views have given rise to the following methods :

1st. Let the patient affected with strangulated hernia be laid upon a bed, his head and pelvis a little raised. Let the feet be drawn toward the trunk, so as to elevate the knees, which should be in contact. The surgeon, standing on the side where the hernia lies, grasps it with one hand, makes a pressure toward the stricture, and with the thumb and a finger of the other hand moves from side to side the portion nearest to the ab-

dominal ring. This process may be gently continued for half an hour.

2d. Should the TAXIS fail, it is advisable to take away blood in sufficient quantity to cause a general relaxation of muscular action, and, at the moment this happens, to renew the taxis. Blood letting may be repeated in co-operation with the other remedies.

3d. Before the muscles recover their action, apply to the hernia ICE, or if that be not procurable, ETHER, or COLD WATER.

4th. The INJECTION *of* TOBACCO is a powerful application. This should be used with some caution. MR. COOPER relates a fatal case produced by the use of one drachm of tobacco. An empiric in this place, employing it more freely, destroyed his patient in fifteen minutes. The injection should be prepared by infusing a drachm of tobacco in a pound of boiling water for ten minutes. If the subject be of an irritable habit, half of this should be injected at first ; but if the whole quantity do not produce symptoms of relaxation, another dose should be administered. This remedy produces distress, and appears to have the inconvenience of being often expelled, before it can act upon the system. When this has happened, the addition of eighty or one hundred drops of tincture of opium has been serviceable in effecting the retention.

5th. The WARM BATH has not perhaps been often successful after the injection of tobacco had entirely failed ; but it merits a trial. The temperature of the bath should be somewhat higher than that of the human body ; and the space of time for bathing half an hour, which is long enough to afford all the good effects peculiar to the warm bath. The local application of cold may be conjoined.

6th. OPIUM is frequently a valuable remedy. It may be employed either merely to alleviate pain, or to effect a reduction. For the latter intention it is conveniently given, during the night, in repeated doses, while the other remedies are intermitted. In one case twenty grains taken in the course of a night produced a return of the hernia.

When these prove ineffectual, it does not seem advisable to exhaust the strength of the patient by other applications. The operation is now the only remaining resource, and to this recourse should be had, perhaps as soon as the others have been fairly tried ; for although it may succeed at the end of a week, as in the case above related, yet I have seen it prove ineffectual at the end of forty-eight hours ; and the disease has been known to be fatal in twenty-four hours.

After the reduction the patient should be advised to put on a TRUSS, and not to hazard the return of his complaint by relinquishing it within a



short period. It has been usual to apply the truss upon the abdominal ring only ; a practice founded on an erroneous idea of the egress of this hernia ; for it does not issue from the abdomen opposite to that ring, but comes out through a fascia two inches above the ring, descends and piercing the tendon of the external oblique, appears at the external, or abdominal ring. The place therefore, where a truss should press in common cases, is at two inches, or an inch and a half above the abdominal ring, toward the anterior superior spinous process of the ilium, or about midway between the os pubis and that process. MR. CLINE first suspected the existence of hernia above the abdominal ring, as I think, from seeing a man perish with the symptoms of strangulated hernia without an external tumour. MR. COOPER has dissected these parts, discovered the internal ring, and perfectly demonstrated this interesting part of anatomy.

JOHN C. WARREN.

*Boston, June 1st, 1807.*

## ARTICLE IX.

*To the Massachusetts Medical Society.*

*Case of CALCULI in the bladder of a boy.*

H. S. a twin-son, was born January 4, 1792. At about the age of two years, he was attacked with a distressing pain in the bladder, and difficulty in passing urine, which occurred in paroxysms, once in two or three weeks for several months, and afterwards not oftener than every second or third month, till he was ten years old; during this period he was occasionally relieved by warm bathing, diuretics and anodynes.

By the advice of different physicians he was frequently in the use of lithontriptics, of which large doses of venice soap, in the opinion of his parents, and from his own declaration, afforded more relief than any other article.

Early in March, 1802, he had a peripneumony, succeeded by a copious purulent expectoration, frequently mixed with blood, hectic fever, profuse sweats, loss of appetite, emaciation, and every appearance of pulmonary consumption, which continued till the end of April, when he began to recover. In this disease great advantage was derived from small does of calomel and opium, till the proper period for tonics and restoratives.

In June following he passed through the measles, with no unusual circumstances, but an exacerbation of his urinary complaints, which gave way to the common remedies.

Having frequently suggested to his parents the probability of a stone in the bladder, and my want of confidence in any other than palliative medicines, which they had learned to administer, I had no particular opportunity to notice his complaints. I often saw him abroad, and was astonished at his activity with his play-mates. He frequently rode on horseback, and the last season skated twenty miles in six hours on the Middlesex Canal.

On the 27th of December, 1807, he was attacked with the greatest severity, with his original complaints, every prescription heretofore used proved ineffectual, except that the warm bath, and large doses of thebiac tincture, afforded a few moments relief; his own fears and the doubts of his parents, prevented a use of the sound, and the 17th of January, 1808, terminated his sufferings.

I examined the body in the presence of Drs. Thompson and Fox. The bladder, which was of the usual dimension and not apparently diseased, contained two stones, they were hard, rough, and of the colour of lime, the weight of one was five drachms, two scruples, and seventeen grains; the other four drachms and eleven grains: laying in contact they were of the size of a pullet's egg, a convexity in the largest corresponded with a con-



cavity in the other, and these surfaces were rendered smooth by friction. The liver appeared considerably enlarged, but the other abdominal viscera were in a natural state.

On opening the thorax we discovered that the right lobe of the lungs was entirely obliterated, but the mediastinum, the left lobe of the lungs, the heart and its appendages, had no appearance of disease.

By enquiry I find, that he constantly experienced, in a greater or lesser degree, the symptoms of urinary calculus, and that after his pulmonary complaints he could not repose on his right side. His appetite and digestion were regular, he preferred animal food, and stimulating drinks (with which he was indulged) to any other regimen, and was often as much exposed to bad weather as any of his acquaintance.

From this history it seems probable that if the operation of lithotomy had been performed previous to 1802, and perhaps afterwards, the patient might have been restored; and it must be regretted, that among a variety of professional opinions, this expedient was not more seriously recommended.

But we here demonstrate an important fact, noticed in some other cases of dissection, that a pulmonary consumption may exist without destroying the subject. There can be no doubt of a total destruction of the right lobe of the lungs

MEDICAL COMMUNICATIONS. 55

six years previous to his death, 'and it does not appear, from a particular enquiry, that he complained of difficult respiration; or was more fatigued when he skated, as before mentiond, or from any other exertion of strength, than his twin-brother, or their associates.

JOSIAH BARTLETT.

*Charlestown, February 1, 1808.*

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ARTICLE X.

*On the vesicating properties of the POTATOE FLY.*

*By Dr. John Gorham. Read Feb. 3, 1808.*

IT is well known, that the only substance in common use among the physicians of this country for the purpose of raising blisters on the skin, is the cantharis, or meloe vesicatorius, a native of the countries bordering on the Mediterranean and imported into the United States, often through the medium of Great Britain. The expense attendant on this mode of procuring it is undoubtedly great, and the possibility of obtaining, at all times, a constant supply, necessarily depends on the concurrence of numerous contingent circumstances, rarely within the control of the medical practitioner. Hence the physicians of America have acknowledged the importance of cultivating a more intimate acquaintance with those indige-

nous productions, which, from the activity of their preparations, and the easy modes of acquiring them for immediate use, are capable of being substituted for foreign medicines, and, consequently, of rendering them independent of those accidents and contingencies whose occurrence, not many years since, was a source of embarrassment and even of distress to the members of the medical profession on this side the atlantic. Among the small number of domestic medicines, whose active virtues have entitled them to a place in our materia medica, we may rank the *Lytta Vittata*, or potatoe fly, an insect, which, at certain seasons of the year, makes its appearance on the potatoe vine, and whose effects, when applied to the human system, are perfectly analogous to those of the Spanish cantharis.

The discovery of its peculiar properties was the result of accident, and it was first employed in the practice of medicine by Dr Isaac Chapman, of Bucks-county, Pennsylvania, whose conclusions, drawn from a partial investigation of the subject, may be found in a paper published in the 2d volume of the New-York Medical Repository. In this, confining himself merely to a history of the effects, resulting from its external application, he is perfectly silent on its peculiar habits and modes of existence, and very limited in his description of its entomological characters. From this concise memoir we learn, that at the proper



season of the year it abounds in immense quantities on the potatoe plant, is easily procured and prepared for medicinal purposes, by the immersion of the vessel, in which it is confined, in hot water and its subsequent drying by exposure to heat ; that the powder of this fly, when applied to the cuticle, produces irritation and the subsequent effusion of a serous fluid between that and the cutis vera, and, that in some cases slight strangury has supervened, in consequence of its partial absorption. The effects, resulting from its internal exhibition, have never been demonstrated by experiment ; and he infers, only from analogy, that they are the same as follow the use of the cantharides. But though the properties of this valuable insect were thus made public, and its importance in our materia medica much enhanced by the facility with which it may be procured, it is probable that the demonstration of its activity was confined within the narrow sphere of Dr. Chapman's operations, since had it been introduced into general practice, and made an article of extensive commerce, its reputation, in the course of ten years, would, doubtless, have reached the physicians of this part of the country. Notwithstanding, however, that its existence and powerful effects have been known, for some time, to one or two medical practitioners in the interior of this State, it is only within a few days that these have been made public by its introduction into the materia medica of

the pharmacopœia of the society by the title of *Lytta Vittata*,\* or potatoe fly. It has, for some years past, been used as a vesicatory by Dr. Israel Allen, of Stirling, and it is to this gentleman that I am indebted for my knowledge of its existence there, and for a quantity sufficient to establish its character by extensive experiment.

The natural history of this insect is still very imperfect, and the following is all the knowledge we have been able to obtain from the publication of Dr. Chapman and the verbal information of Dr. Allen. The Pennsylvanian fly "has a very near resemblance, in outward form, to the meloe (vesicatorius) alatus viridissimus nitens, antennis nigris of Linnæus, or Spanish flies, as they are commonly called, but is rather smaller than those brought from Spain and of a very different colour; the head is of a very light red, with black antennæ; the elytra or wing cases are black, margined with pale yellow, and a stripe of the same colour extends along the middle of each of them; the tarsi have five articulations, the mouth is armed with jaws and furnished with tarsi." "I found them," says Dr. Chapman, "in greatest number in potatoe patches; and when the potatoes are young they frequently devour all the green leaves; they are frequently found among beets and garden purslane, of the leaves of which they are very fond."†

\* Dr. Woodhouse, of Philadelphia, has discovered other species of the *Lytta*. Med. Rep. vol. 3.

† Medical Repository, vol. 2. p. 174.

The fly of Massachusetts, at least in its dried state, is from four to six lines in length; its head and elytra are uniformly black, and the latter want the margin and stripe of yellow, observable in the insect of Pennsylvania. Its belly is ash-coloured and in the cavity of the abdomen, as remarked by Dr. Chapman, "is a hard, white substance, about the size of a grain of wheat, which, when powdered, appears like meal, and when rubbed with water forms a milk like emulsion." The thickness of the potatoe fly, which is nearly uniform throughout, is from one quarter to one third its length. When soaked in water, its parts may be more accurately observed, and it will be found nearly to resemble some species of the beetle, by the thickness and hardness of the coverings which protect the membranaceous wings. When recently pulverised, it exhales a faint odour, which by some has been compared with that of the powder of liquorice root, and by others to althea ointment. It generally appears on the vines about the end of July and the first week in August, and in some years, according to the account of Dr. Allen, in such abundance, that many pounds of them may be collected in a day. They inhabit the soil at the foot of the plant; they ascend in the morning and afternoon, but generally avoid the heat of the sun at noon. As they fly with great difficulty, they are easily caught; and are prepared for medicinal purposes by shaking them from the plant into hot



## 60 MEDICAL COMMUNICATIONS.

water, and afterwards drying them by the rays of the sun.

By the very liberal manner in which I have been supplied with these flies by Dr. Allen, I have been able to institute an extensive series of experiments, in different forms, on different persons; and they have never failed, even in a single instance, of producing all the immediate effects which I anticipated from their external application or internal exhibition. As it is unnecessary however to detail the greatest part of these, I shall confine myself to the few, which from peculiarity of constitution, or error of management, are most capable of illustrating the position we have assumed, of their efficacy.

CASE 1. June, 1807. Samuel White, an invalid, about 45 years of age, has, for some time past, been subject to occasional attacks of hiccough. During one of these paroxysms, after the unsuccessful exhibition of various medicines, had a large plaster covered with the powder of *Lytta Vittata* applied over the region of the diaphragm. During the succeeding night the patient was very restless, and by frequent change of posture gradually moved the plaster over a great part of the abdomen; and when he awoke in the morning, found it resting on his thigh. The whole surface of the former was completely vesicated and insipient blisters were perceptible on the latter. The

hiccough was relieved though not removed. In consequence of this extensive vesication a stranguery supervened, which was soon removed by opiates and mucilaginous drinks. The excoriated surfaces were dressed with the common resinous ointment and soon healed.

CASE 2. June 10. Mary Wareham complained of intense pain in the head, for which blistering was prescribed. A plaster of the potatoe fly was applied, and the next day the vesication was found very perfect, accompanied with constant irritation of the part. The head-ache in a few days subsided, but the inflammation of the cutis was very considerable, continued for some days, and was succeeded by the formation of a number of boils about the size of hazlenuts, and of extreme sensibility. These at length suppurated and were finally healed by the application of the ung : resinosum cum oxide hydrargyri rubro.

CASE 3. January 12, 1808. Sally Sharp came into the Almshouse for rheumatic pains, extending from the hip joint to the knee of the right leg. The pain in the last joint being most troublesome a plaster covered with powder of *cantharides* was applied to its surface and kept in that situation for twenty-four hours ; she experienced no irritation on the part, and when the plaster was removed there was no vesication perceptible : it was again

## 62 MEDICAL COMMUNICATIONS.

spread with *cantharides* and applied as before ; but no obvious effect resulted from its second application. The flies were undoubtedly in good order, since a great number of persons had been completely blistered by powder from the same parcel. A plaster of *potatoe fly* was then substituted, and the next day I found with much satisfaction that it had been followed by a complete vesication. The blister, to use the homely phrase of the patient, had run half a pint, and for a time the pains were alleviated.

If necessary I might bring forward a multitude of cases in support of the efficacy of the *Lytta Vitata*, but these I think are sufficient to establish the fact, that as a vesicatory they are at least equal if not superior to the *cantharides* usually employed for that purpose in this country. Since then they are capable, even when externally applied, of producing a very considerable irritation in the urinary organs, we should judge, à priori, that a much more positive effect would result from their internal exhibition ; and accordingly, I endeavoured to ascertain the truth of the position by experiment. Having about one drachm of the flies remaining of the parcel which I first received from Dr. Allen, it was infused in about six ounces of proof spirit, and the whole was undisturbed for some weeks. The tincture therefore I presume was saturated, as the proportion of the flies was greater and the infusion longer continued than the



European pharmacopœias have ordered in the preparation of the ordinary tincture of cantharides.

CASE 4. July 1807. Sarah Peirce, aged 70, was labouring under a paralysis of the neck of the bladder. Her urine passed off insensibly, and her situation rendered her uncomfortable both to herself and to others. The tincture of *Lytta Vittata* was prescribed in doses of ten drops twice a day, and these were gradually augmented to twenty drops three times in the twenty-four hours. In the course of a few days a slight irritation was produced in the urethra, and the power of retaining her water had gradually increased. At the end of three weeks the incontinence of urine had altogether ceased.

CASE 5. J. Nelson came under my care January 25, 1808, for a gonorrhœa of long standing. His symptoms were slight irritation during the passage of urine, and a discharge of a yellowish white matter, opake and in considerable quantity. He was ordered to take fifteen drops of the tincture three times a day. On the 27th the discharge of purulent matter had increased, accompanied with much scalding immediately after the passage of urine; the dose was increased to eighteen drops three times a day. January 30th. Discharge of matter from the urethra lessened; complains of pain on making water, and of a soreness

of the fauces extending into the *æ*sophagus. February 2. Discharge much abated, and the irritation in the urethra rather less. In consequence however of the increased soreness which was now experienced even in the stomach, the medicine was discontinued. During its exhibition the renal secretion was much greater than usual.

This tincture has been administered internally in many cases of diminished sensibility of the urinary organs, in gleet, and as a diuretic in dropsy; and it has uniformly been found in all to increase the discharge of urine, and to produce considerable degrees of irritation in the urethra and at the neck of the bladder.

It has also been applied externally as a vesicatory, and was always found to answer the purpose intended, though its effects were I think less complete than resulted from the application of the fly in substance.

From all therefore that I have been able to collect from the communication of Dr. Chapman, the verbal information of Dr. Allen, and the results of my own experiments continued for some months and made on more than fifty different cases, I think I shall be justified in drawing the following conclusions :

1. That the powder of the *Lytta Vittata*, or potatoe fly, when suffered to rest for some time on the cuticle, is capable of exciting inflammation and producing an effusion of a serous fluid between it and the cutis vera.

2. That the discharge in all cases is equal, and in many superior to that which results from the application of the powder of the cantharis ; a remark which coincides precisely with the observations of Drs. Allen and Chapman. The superiority of the potatoe fly in this respect is doubtless owing, in some degree, to its recent preparation. The cantharides are brought from a great distance, and there is sufficient reason for believing that their active qualities, like those of other medicines, in general, are impaired by age. Hence therefore this fact may be used as an argument in favour of the general adoption of our indigenous production, since it exists among us, and may be always obtained in a comparatively recent state.

3. That the saturated tincture of this fly possesses the vesicating property of the substance, but in rather an inferior degree.

4. That both the powder and the tincture are capable of inducing strangury by their external application.

5. That the vesication by the potatoe fly is effected in a shorter time than by the cantharis.

6. That when taken internally these flies produce all the effects, apparently in the same degree, as result from the exhibition of cantharides.

7. That the inflammation and subsequent secretion of purulent matter, are in general greater from the use of the potatoe fly than of the cantharis.



## ARTICLE XI.

*A Case of SCIRRHOUS TESTIS cured by Electricity.*

*By MATTHIAS SPAULDING.*

*To the Massachusetts Medical Society.*

GENTLEMEN,


ON the 25th of October, 1806, a farmer called on me with a scirrhus testis, which he told me had been so for two years, and had become so painful, that he was obliged to lay aside labour. The diseased testis was at least four times as large as the sound one, and extremely hard. He said, that he had been under the care of a surgeon during great part of the abovementioned time, who called the disease a hydrocele. I told him, that it was a scirrhus testicle, and recommended electricity.

Two or three shocks were passed through it in different directions. They caused some pain and a considerable degree of heat in the part. Nothing further was done until the 4th of November following, when he told me, he was better. No great difference, however, could be perceived in the testis. I repeated the shocks, but made them stronger than before. On the 19th I found it considerably lessened. The shocks were repeated on the 19th, 22d, and 28th of the same month, and

## MEDICAL COMMUNICATIONS. 67

on the 9th of December, when the testis was reduced nearly to the size of the other. I heard no more from him until the end of about two months, when he informed me, that he was perfectly well, and could perform his usual labour with ease.

*Amherst, Aug. 16th, 1807.*



### *Report of a Committee of the Counsellors.*

THE Committee, appointed by the Counsellors of the Massachusetts Medical Society to examine and report what construction ought to be given to the last clause of the 4th section of the additional act of incorporation passed March 8th, 1803, ask leave to report—

That in the opinion of your Committee by the clause in the act above referred to, every practising physician or surgeon, residing within this Commonwealth is entitled, upon application to the Counsellors of the Massachusetts Medical Society, and signing the by-laws, to be admitted as a fellow of said society who shall possess the qualifications following :

1. He must have received of the Censors of the society, or of some district society, letters testimonial of their approbation of him as a practitioner in medicine or surgery ; or he must have re-

## 68 MEDICAL COMMUNICATIONS.

ceived the degree of Batchelor of medicine at Harvard University.

2. He must have practised medicine or surgery for the term of three years subsequent to his receiving the approbation of the Censors or a medical degree, and in such a manner as to gain the approbation of the most competent judges.

3. He must have supported a good moral character.

That it appears, to your Committee, that it belongs to the Counsellors to judge and determine whether the applicant be qualified in the manner specified in the act abovementioned.

That it ought to be incumbent on the applicant, through the recording secretary, to lay before the Counsellors satisfactory evidences of these qualifications.

Your Committee cannot undertake to specify the particular kind of evidence, which, in all cases, the applicant should be required to produce, respecting his qualifications, in the two particulars last mentioned, it ought to be the best which his situation may admit of, and in no case less than a certificate in his favour, signed by two gentlemen of respectability, of one of the learned professions, residing in or near the place or places where the applicant has practised medicine or surgery.

Your Committee beg leave, in addition hereto to report the form of a Certificate to be given to



MEDICAL COMMUNICATIONS. 69

those fellows, who may be admitted agreeably to 4th sect. of the act before mentioned.

*THIS certifies that A. B. of C. in the county of D. and Commonwealth of Massachusetts, having made application to the Counsellors of the Massachusetts Medical Society at their meeting holden at — on the — day of — 18— to be admitted into said society, and having produced to the said Counsellors satisfactory evidence of his possessing those qualifications which entitle him to an admission agreeably to a law of this Commonwealth passed March 8th, 1803, was then admitted, having signed the by-laws, a Fellow of the Massachusetts Medical Society, and is entitled to all the privileges and immunities thereto annexed.*

*In testimony whereof I have hereunto set my hand, and caused the seal of the Corporation to be affixed at — this — day of — A. D. 18—*

PRESIDENT.

*Recording Sec'y.*

Per Order,

JOSHUA FISHER.

## MEDICAL INTELLIGENCE AND NOTICES.

### ANALYSIS OF THE BALLTOWN MINERAL WATERS.

ALTHOUGH we hope, that so useful and able a publication as the MEDICAL REPOSITORY is generally circulated among the fellows of the society, yet it may not be improper to extract from it the following analysis, as another has been published in Boston, which seems not to have been accurate.

Dr. Seaman of New-York published in 1793 a Dissertation on the Mineral Waters of Saratoga. In this dissertation are mentioned the several experiments made ; whence he drew the following conclusion, that this water contained as much *carbonic acid* as would, when separated in the form of gas, about equal its own bulk, and that in a quart of it there were also

- 5. 2 grains of the carbonate of soda,
- 31. 6 — of the muriate of soda,
- 38. 0 — of the carbonate of lime,
- 1. 7 — of the carbonate of iron.

Two years afterward, viz. in 1795, Dr. Peter Vendervoort gave an account of the analysis of the mineral waters of Balltown, as made at the springs. In his treatise the several experiments

are detailed at large ; from them he inferred, that one gallon contained 100.75 grains of carbonic acid, which is about equal to its bulk when separated in the form of gas,

144. 0 grains of the muriate of soda,

133. 0 — of the carbonate of lime,

15. 5 — of the carbonate of iron.

Dr. Seaman is of opinion, that this water contains only an equal bulk of carbonic acid gas ; while the French analysis published here made it three times its bulk, even after transportation to France.

His experiments also disagree from those made in France, in not finding either muriate of lime or muriate of magnesia ; instead of which he found the carbonate of magnesia.

He concludes, that the mineral water of Balltown contains

Carbonic acid,

Muriate of soda,

Carbonate of lime,

Carbonate of iron, and

Carbonate of magnesia.

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The interest, which the Medical Society has always felt, for the safe and liberal diffusion of vaccination, has induced them to form a commission for the purpose of inquiring “ Into the present state of evidence respecting the prophylactic powers of the cow-pock ; and for reporting such



72 MEDICAL INTELLIGENCE, &c.

measures as they may find to be expedient for establishing the practice on a safe foundation?"

The society has also directed that it shall be the duty of every member to inquire, "Whether the native cow-pock is to be discovered in the cow in this country?" and to transmit the result of such inquiries to the corresponding secretary.

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The *Parmacopœia* of the society has been adopted by the apothecaries in Boston and throughout the state, so far as we are informed; and with most cordiality by the most eminent of them. There is therefore good reason to expect we shall avoid the embarrassments and dangers, which have been produced by a multitude of names and by the variations in strength of the same preparations of medicine made by different apothecaries.

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The Counsellors invite those members, whose names may be omitted in the list of fellows of the society now published, to give information thereof to the corresponding secretary.

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The fellows of the society are requested to transmit, as early as possible, their communications for the succeeding number of the society's publications; as this will probably be put in order for printing, without any unnecessary delay. The by-laws of the society indicate, as subjects of

attention, the history of epidemics, accounts of births and deaths, and diaries of the weather, &c. The Counsellors will also receive, with pleasure, communications on the natural history and properties of indigenous plants, descriptions of mineral substances, histories of particular diseases, the effects of medicine and the morbid appearances after death, and anomalous cases from vaccination.

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Mr. Godon, a distinguished mineralogist, has been engaged during the winter past in giving a course of lectures on mineralogy in Boston. Many gentlemen have imbibed a taste for the study of that science and now cultivate it with zeal and success. Cabinets of minerals are forming. Hence we may hope, that researches, which have been much neglected in this part of America, will soon afford us even a more accurate knowledge of its mineralogical contents, than we have of other parts of the United States.

To Mr. Godon we are indebted for the discovery of beautiful species of green and red porphyries, not inferior to the Egyptian or antique porphyry. This gentleman has ascertained the existence of very fine manganese in the town of Vergennes, in Vermont, the surface of which is mamellated and covered with brilliant crystals. The talents of Mr. Godon have been also useful in determining the working of a rich mine of iron in Vermont, and a coal mine in Rhode-Island. The latter is now opening with vigour.

Mr. MICHAUD, well known as the author of travels in the western country, and as son of the author of the *Flora Boreali-Americana*, and editor of that work, has been lately engaged in travelling through this country for the purpose of investigating the qualities of various kinds of wood, and their applications in the arts. During the last summer Mr. M. passed through the eastern states, and made many interesting observations; and we have the satisfaction to hear that his tour to the south and west has opened to him new sources of information. He proposes to publish the results of his investigations, illustrated with numerous plates, on his return to Paris.

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The experiments of Mr. Davy on the Alkalies have been repeated before the Akesian and Mineralogical Societies, by Mr. Pepys, with a very large galvanic apparatus, consisting of one hundred and twenty pairs of plates of thirty six inches surface each, containing nearly seven hundred weight of copper and zinc. The solid caustic potash was used, slightly moistened by the breath. The metalloid obtained was highly inflammable, swam in rectified naphtha, but was with difficulty separated from the potash, in which it is plentifully imbedded, after being exposed to the galvanic action. Water being dropped upon it, the particles explode similarly to grains of gunpowder thrown into the fire. The metalloid obtain-



ed from soda is not so highly inflammable, and can therefore be collected more easily. A globule, about the size of a small tare, being thrown on paper moistened, instantly became apparently red hot, and running off the surface of the water, fell luminously through the air. Mr. Allen has also repeated the experiments of Mr. Davy, and obtained both the mettalloids by four troughs of fifty pairs, each of sixteen inches surface.

*(Med. and Phys. Journal.)*

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A complete mammoth has lately been found (though not alive) in a state of perfect perservation, on the borders of the Frozen ocean. It was discovered by Schoumachoff, a Tungoose chief, in the autumn of 1799, in the midst of a rock of ice ; but it was not till the fifth year after finding it, that the ice had melted sufficiently to disengage the mammoth, when it fell over on its side on a bank of sand. Schoumachoff then cut off the tusks, which he bartered for goods with a Russian merchant to the value of fifty rubles, (eleven pounds five shillings.) He then left the carcass to be devoured by bears and wolves ; previously to which, he had a rude drawing made of it, which represents it with pointed ears, very small eyes, horses' hoofs, and a bristly mane, extending along the whole of its back. In 1806, Mr. Michael Adams, of Petersburg, hearing of the circumstance, repaired to the spot, where he found the

skeleton entire, one of the fore feet excepted, though nearly stripped of its flesh. The vertebræ, from the head to the os coccygis, one of the shoulder blades, the pelvis, and the remaining three extremities, were still firmly held together by the ligatures of the joints, and by strips of skin and flesh. The head was covered with a dry skin. One of the ears, well preserved, was furnished with a tuft of bristles. These parts could not avoid receiving some injury, during their removal to Petersburg, a distance of 6875 miles; the eyes, however, are preserved, and the pupil of the left eye is still distinguishable. The tip of the under lip was eaten away, and the upper being destroyed, the teeth were exposed. The brain, still within the cranium, appeared quite dry. The parts least damaged were one of the fore feet and one of the hind; these were still covered with skin, and had the sole attached to them. According to the Tungoose chief, the animal was so corpulent and well fed, that its body hung down below the knee joints. It was a male, but had neither tail nor trunk. From the structure of the os coccygis, however, Mr. Adams is persuaded it had a thick short tail. Schoumachoff always persisted in asserting, that he never saw any appearance of a proboscis; and it does not appear probable that his rude draughtsman would have omitted such a striking feature, if there had been one. The skin (three fourths of which are in the

possession of Mr. Adams) was of a deep gray colour, and covered with reddish hair and black bristles. More than 40lbs. weight of it, which had been trodden into the ground by the bears, were collected, and many of the pieces were 2 feet 4 inches long. The head weighs 460lbs; the two horns, each of which is  $9\frac{1}{2}$  feet long, weigh 400 lbs; and the entire animal measured  $10\frac{1}{2}$  feet high by  $16\frac{1}{2}$  feet long. The tusks are curved in the direction opposite to those of the elephant, bending toward the body of the animal. Mr. Adams adds, that he found a great quantity of amber on the shores.

*(Med. and Phys. Journal.)*





## LIST OF FELLOWS.

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1808.

[Those with this (\*) mark prefixed are deceased. Those with this (†) have retired. Those with this (‡) have removed.]

\*Samuel Adams, *Boston*.  
Samuel Adams, *Wiscasset*.  
\*Nathaniel W. Appleton, *Boston*.  
Moses Appleton, *Waterville*.  
Israel Allen, *Sterling*.  
Israel Atherton, *Lancaster*.  
Samuel Adams, *Bath*.  
Benjamin Adams, *Lynnfield*.

William Baylies, *Dighton*.  
Thomas Babbit, *Brookfield*.  
Alvan Bacon, *Scarborough*.  
\*Joshua Barker, *Hingham*.  
Jeremiah Barker, *Falmouth*.  
Josiah Bartlett, *Charlestown*.  
John Bartlett, *Roxbury*.  
Nathaniel Bradstreet, *Newburyport*.  
Chauncey Brewer, *West-Springfield*.  
Oliver Brewster, *Becket*.  
‡Josiah W. Brewster, *Blanford*.  
William Buel, *Sheffield*.  
John Brooks, *Medford*.

\*Samuel Brown, *Boston.*

Benjamin Brown, *Waldoborough.*

Hugo Burghardt, *Richmond.*

Peter Bryant, *Cummington.*

Asa Bullard, *Boston.*

Amos Bancraft, *Weston.*

\*Benjamin Curtis, *Boston.*

\*John Cummings, *Concord.*

†David Cobb, *Taunton.*

Abijah Cheever, *Boston.*

Timothy Childs, *Pittsfield.*

‡Hezekiah Clark, *Lanesborough.*

Parker Cleaveland, *Newbury.*

Nehemiah Cleaveland, *Topsfield.*

Nathaniel Coffin, *Portland.*

John G. Coffin, *Boston.*

William Coffin, *Gloucester.*

Charles Coffin, *Newbury.*

Daniel Coney, *Augusta.*

Robert Cutler, *Amherst.*

William Cutler, *Hardwick.*

Isaiah Cushing, *Thomaston.*

†Samuel Danforth, *Boston.*

Thomas Danforth, *do.*

Aaron Dexter, *do.*

John Dixwell, *do.*

John Drury, *Marblehead.*

Simeon Dunbar, *Bridgewater.*

Elihu Dwight, *South-Hadley.*



## LIST OF FELLOWS.

81

William Eustis, *Boston.*

Shirley Erving, *Portland.*

Samuel Emmerson, *Wells.*

Samuel Farnsworth, *Bridgetown.*

Enoch Faulkner, *Hamilton.*

Noah Fearing, *Bridgewater.*

Seth Field, *Brookfield.*

John Field, *Rutland.*

Oliver Fisk, *Worcester.*

Joshua Fisher, *Beverly.*

Joseph Fisk, *Lexington.*

John Fleet, *Boston.*

Austin Flint, *Leicester.*

Daniel Fogg, *Braintree.*

Dudley Folsome, *Gorham.*

Francis Foxcroft, *Brookfield.*

Nathaniel Freeman, *Sandwich.*

\*John Frink, *Rutland.*

John Frink, *Rutland.*

\*John Flagg, *Lynn.*

John Flint, *Petersham.*

Noah Fyefield, *Weymouth.*

\*Joseph Gardner, *Boston.*

William Gamage, *Cambridge.*

Jones Godfrey, *Taunton.*

James Gardner, *Lynn.*

Henry Gardner, *Malden.*

Jacob Gates, *Boston.*

Rowland Gelston, *Nantucket*.

John Green, *Worcester*.

John Gorham, *Boston*.

\*Abner Hearsy, *Barnstable*.

\*John Homans, *Boston*.

†Joseph Hunt, *Concord*.

Nathan Hayward, *Plymouth*.

Abiel Heywood, *Concord*.

John Hay, *Reading*.

Richard Hazeltine, *Brunswick*.

Lemuel Hayward, *Boston*.

Gad Hitchcock, *Pembroke*.

Edward A. Holyoke, *Salem*.

Samuel Holtén, *Danvers*.

Amos Holbrook, *Milton*.

Joseph Howe, *Templeton*.

Estis Howe, *Belchertown*.

William Holland, *Belchertown*.

John C. Howard, *Boston*.

Marius Howe, *Bristol, (Me.)*

†Ebenezer Hunt, *Northampton*.

Isaac Hurd, *Concord*.

John Hubbard, *Readfield*.

John A. Hyde, *Freeport*.

Abraham Haskell, *Lunenburg*.

Walter Hunnewell, *Watertown*.

William Ingalls, *Boston*.

# LIST OF FELLOWS.

83

\*Charles Jarvis, *do.*  
 James Jackson, *do.*  
 John Jeffries, *do.*  
 Timothy L. Jennison, *Cambridge.*  
 David Jones, *North Yarmouth.*  
 Horatio Jones, *Stockbridge.*

Thomas Kittredge, *Andover.*  
 \*Giles C. Kellog, *Hadley.*  
 \*William Kneeland, *Cambridge.*  
 †Thomas Kast, *Boston.*  
 \*Aaron Kingsman, *Portland.*

Isacc Lincoln, *Topsham.*  
 \*John Linn, *Boston.*  
 \*Lewis Le Prelate, *Roxbury.*  
 †James Lloyd, *Boston.*  
 William Lamb, *Grafton.*  
 Jonathan Leonard, *Sandwich.*  
 Eldad Lewis, *Lenox.*  
 Moses Little, *Salem.*  
 Abraham Lowe, *Ashburnham.*  
 \*John Long, *Shelburne.*

\*Samuel Mather, *Westfield.*  
 \*Matthew Mayhew, *Edgarton.*  
 Joseph Manning, *Salem.*  
 James Mann, *Wrentham.*  
 Thomas Manning, *Ipswich.*  
 \*Asa Miles, *Westminster.*



Ammi R. Mitchel, *North Yarmouth.*

Nathaniel Miller, *Franklin.*

Stephen Munroe, *Sutton.*

\*Thaddeus M'Carty, *Worcester.*

Samuel Nye, *Salisbury.*

Benjamin L. Oliver, *Salem.*

Hector Orr, *Bridgewater.*

\*Joseph Osgood, *Andover.*

\*Joseph Orne, *Salem.*

Joseph Osgood, *Salem.*

George Osgood, *Andover.*

Jonathan Osgood, *Gardner.*

Cushing Otis, *Scituate.*

George Osgood, jun. *Danvers.*

\*James Pecker, *Boston.*

\*Oliver Prescott, sen. *Groton.*

\*Oliver Patridge, *Stockbridge.*

\*Daniel Pierce, *Kittery.*

\*Charles Pyncheon, *Springfield.*

William Porter, *Hadley.*

Benjamin Page, jun. *Hallowell.*

James Parker, *Gardiner.*

Abiel Pearson, *Andover.*

Samuel Perry, *New Bedford.*

Martin Phelps, *Chester.*

Ebenezer H. Phillips, *Charlton.*

Thomas Pickman, *Salem.*

## LIST OF FELLOWS.

85

Oliver Prescott, *Groton*.  
Cyrus Perkins, *Boston*.  
Moses Phelps, *Hubbardston*.

\*Isaac Rand, sen. *Cambridge*.

Isaac Rand, jun. *Boston*.

Isaac Rand, tert. *Boston*.

†Thomas Rice, *Wiscasset*.

Jesse Rice, *Minot*.

Tilley Rice, *Brookfield*.

Abijah Richardson, *Medway*.

Daniel Rose, *New Milford*.

Peter Snow, *Fitchburg*.

Jonathan Sibley, *Union*.

Nathaniel Saltonstall, *Haverhill*.

Erastus Sargeant, *Stockbridge*.

Micajah Sawyer, *Newburyport*.

Samuel Savage, *Barnstable*.

Charles L. Segars, *Northampton*.

Remember Sheldon, *Williamstown*.

Benjamin Shurtleff, *Boston*.

Daniel Shute, *Hingham*.

\*Amos Spofford, *Rowley*.

William Spooner, *Boston*.

Mason Spooner, *Templeton*.

Ezra Starkweather, *Chesterfield*.

John Stone, *Greenfield*.

Foster Swift, *Taunton*.

\*John B. Swett, *Newburyport*.

\*John Sprague, *Dedham*.  
\*Charles Stockbridge, *Scituate*.  
\*John Swett, *York*.  
\*Elisha Story, *Marblehead*.  
† Marshal Spring, *Watertown*.  
John Stockbridge, *Bath*.  
Moses D. Spofford, *Rowley*.  
Ebenezer Starr, *Newton*.

James Thacher, *Plymouth*.  
Thomas Thaxter, *Hingham*.  
Robert Thaxter, *Hingham*.  
Philip Theobald, *Dresden*.  
Stephen Thomas, *Portland*.  
Abraham R. Thompson, *Charlestown*.  
Joseph Torrey, *Salem*.  
William Towner, *Williamstown*.  
David Townsend, *Boston*.  
John D. Treadwell, *Salem*.  
Cotton Tufts, *Weymouth*.  
Calvin Thomas, *Tyngsborough*.  
\*Simon Tufts, *Medford*.

\*John Vanhorn, *West Springfield*.  
John Walton, *Pepperell*.  
John Warren, *Boston*.  
John C. Warren, *Boston*.  
\*George Ware, *Dighton*.  
† Richard Wells, *Conway*.  
Henry Wells, *Montague*.



## LIST OF FELLOWS.

87

Thomas Welsh, *Boston*.  
\*Elisha Whitney, *Beverly*.  
Israel Whetton, *Winchendon*.  
William S. Williams, *Deerfield*.  
Thomas Williams, *Roxbury*.  
Tapley Wyeth, *Sherburne*.  
\*Joseph Whipple, *Boston*.  
\*William Whiting, *Great Barrington*.  
†Benjamin Waterhouse, *Cambridge*.  
Charles Windship, *Roxbury*.

Francis Vergennes, *Newburyport*.

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## HONOURARY MEMBERS.

Pardon Bowen, *Providence, R. I.*  
Ammi R. Cutter, *Portsmouth, N. H.*  
Manassah Cutler, *Hamilton, Mass.*  
John Ferron, *Lisle, France*.  
Lemuel Hopkins, *Hartford, Con.*  
John Jones, *New York*.  
Adam Kuhn, *Philadelphia, Penn.*  
John C. Lettsom, *London, G. B.*  
John Osborne, *Middletown, Con.*  
William Pain, *Worcester, Mass.*  
Benjamin Rush, *Philadelphia, Penn.*  
William Shippin, *do.*  
Elias Willard, *Albany*.

Samuel Tenney, *Exeter, N. H.*

Benjamin Vaughn, *Hallowell.*

Caspar Wistar, *Philadelphia.*

Andrew Duncan, *Edinburgh.*

## APPENDIX.

### REPORT ON VACCINATION,

Read at the Annual Meeting of the MASSACHUSETTS MEDICAL SOCIETY. June 1, 1808.

*THE Committee appointed on the 3d of February 1808, by the Counsellors of the Massachusetts Medical Society "to inquire into the present state of the evidence respecting the prophylactic power of the cowpock, and to report such measures as they may find to be expedient for establishing the practice on a safe foundation," beg leave to offer the following report ;*

AN examination of the principal writers for and against vaccination has fully confirmed, in the opinion of the committee, the statement originally made by Dr. Jenner, which was in substance as follows, viz. "that the animal economy is under precisely the same laws with respect to the action of vaccine and variolous virus, and that both of them are by inoculation preventives of the smallpox ; but that the advantages are greatly in favour of vaccine inoculation, because it is equally safe at all ages and in every season, and does not occasion confinement,—because it neither diffuses contagion nor excites scrophula, and because it is free from the danger attending the inoculated smallpox, which still proves fatal in one case out of two hundred and fifty."

To quote authorities, or to adduce the experiments which have been made, in support of these opinions must be needless. The experiments could scarcely be numbered, and for authorities we have more than nineteen twentieths of all the practitioners of medicine, who have investigated the subject. Let us appeal only to the test proposed by one of the most able opponents of the practice of vaccination ; this is Mr. Goldson, an English surgeon, who has published "cases of smallpox subsequent to



vaccination." Mr. Goldson makes the following remark ; " The full extent of the powers of vaccination can only be ascertained when the smallpox shall again become the prevailing epidemic :—when the state of the atmosphere shall again be so far variolated, that seclusion can be of little avail ; then will be the time to prove, how far the security vaccination gives, will extend." To which Dr. Willan, in his treatise on vaccine inoculation applies the following observations ; " This crisis appears to have taken place in the metropolis last year, when the smallpox was more extensively diffused, and proved more fatal than it had been in any of the four preceding years. All persons resident in or near London, who had been vaccinated since the beginning of 1799, but especially the children of the poor, must have had frequent intercourse with variolous patients during the time of the epidemic. The primary series of vaccine inoculations were thus tried in the severest manner possible, yet the subjects of them, to the amount of many thousands, or even tens of thousands, remained proof against the contagion.

" Whilst we acknowledge that some, who had been vaccinated in the preceding years, took the smallpox at this period, we have reason to congratulate ourselves that the number was so small, and that so few mistakes had been committed in a mode of practice entirely new. Mr. Goldson himself allows, ' It was not extraordinary such cases should occur in the early stages of its introduction.'—' Indeed, prior to the nature of the disease being sufficiently understood,' he says, after Dr. Jenner, ' many practitioners took up the lancet, without ever having seen the vaccine pustule.'"

The high interest which this discovery excited in this country at the time of its annunciation, and the evidence, which was immediately offered by Dr. Jenner and his coadjutors, did, at a very early period, engage the attention of almost every individual among us in the medical profession ; and that evidence was so perfectly satisfactory to the public, that a formal investigation of the subject by this society, at that period, was altogether unnecessary.

The most important laws of the vaccine disease were stated by Dr. Jenner, when he introduced the knowledge of it to the world. The principles he laid down and the limitations he pointed out are sufficient to guide us in the great majority of cases. But it was not possible that he should at the outset have been minute in noticing every variety of circumstance attending vaccination. Dr. Jenner foresaw that many errors would be committed and many difficulties would arise, if this practice should not be pursued with the utmost prudence and circumspection. Such errors and difficulties would necessarily affect the reputation of the practice, of which the rules were contravened in the production of them.

Difficulties have arisen, and in reporting the present state of evidence on this subject, it is proper and may be useful to state that the utility of vaccination has been much more contested within the last five years, than during the five years, which preceded them. The committee have examined the evidence offered against vaccination and have endeavoured carefully to estimate its importance; the result of their examination they will state in a manner as concise as shall be consistent with perspicuity.

From the evidence which has been furnished to the public, it appears unquestionably that very many persons, who have been supposed to be secured from smallpox by vaccination, have been subsequently affected with smallpox in a degree more or less severe; although the occurrence of that disease under such circumstances has very rarely been followed by death. From the number of instances of this sort which have already been made public there is reason to believe that very many similar ones will occur, unless prevented by seasonable caution. To whatever cause these events may be attributed, it is not to be presumed that we shall be exempt from similar misfortunes in this country, unless we provide against them; and as they would probably take place during the general prevalence of smallpox among us, and would therefore happen many of them at the same moment, they would be peculiarly distressing.

The committee are happy to say that all real evils of this sort are capable of being obviated; and that if this is not true in every case, the exceptions are at least as rare, as those which happen in the practice of variolous inoculation.

It appears that a large proportion of those, who have had the smallpox after supposed vaccination, were inoculated by persons not of the medical profession, or by those in it, who had not acquired a knowledge of the vaccine disease. In other countries, as in this, persons out of the medical profession have practised vaccination, many of them from motives of benevolence, although some have been influenced by those of a very different character. Whatever motives may have influenced them, the practice of such persons should be discountenanced; for although in perfect cases the character of the cowpock is so decidedly marked, that a very little experience renders it familiar, yet many equivocal cases occur, in which a nice discrimination and a habit of comparing the appearances of cutaneous diseases are found requisite.

It is however true that all the cases of failure cannot be referred to ignorance in the inoculators; and that the smallpox has appeared with a character more or less strongly marked even in those, who have been vaccinated by regular practitioners of medicine; and indeed by practitioners who have had much experience and been well-informed on the subject of cowpock. In support of this statement the committee refer among other authorities to the following, viz; Willan on Vaccine Inoculation; Medical and Physical Journal, vol. 14. pages 5, 6, 21, 143, 308, and 407; Medical and Chirurgical Review, vol. 13, in the miscellaneous part, pages xcii, cxv, and cxvii.; vol. 14, miscellaneous, pages lxxxv, cxxxiv, and cxxxv. Many other references might be given to other pages in the same and also to other works. The committee have selected the following cases, which are not however more remarkable than many others.

*"A Case of Smallpox after Vaccination; communicated by Mr. Blair, Surgeon of the Lock Hospital, &c.*

"On May 7, 1803, I inoculated a child, named Alice Gor-thorpe, with the vaccine fluid. The disease made its usual pro-



gress, and left a cicatrix on each arm, as may be seen at present. On the eighth day after inoculation, I took matter from this child, and vaccinated several others.

"On Monday, June 3, 1805, the mother of the child, residing at No. 25, Tower-street, Seven Dials, came to my house, and shewed me the patient covered with a distinct variolous eruption, small in size, but fairly matured. I sent her immediately to Dr. Adams, (who succeeded Dr. Woodville at the Inoculation Hospital) to prevent my giving an erroneous opinion respecting her case; he agreed with me that it was certainly the smallpox; and that this instance must be added to the few others which have occurred, of the variolous infection taking place subsequent to complete vaccination.

"I have only to add, that three years ago I vaccinated another child of the same parent, and a third on the 21st of May last; both of which, with nine more who had been inoculated in the same family, escaped the smallpox on this occasion; and, what is deserving of notice, the infant whom I vaccinated on the 21st of last month (Thomas Gorthorpe) had slept in the same bed with his sister during the whole progress of her recent disease.

"*Great Russel-street, Bloomsbury, June 6, 1805.*"

[Med. & Phys. Jour. vol. 14, p. 21.]

*Extracts from a paper by Mr. Ring.*

"Two other cases of the smallpox have occurred since my last communication, in patients vaccinated by me. One of them is a child of Mr. Pearse in Great York Mews, Baker-street, who was inoculated four years ago, with matter taken on the tenth day. I have long avoided to take matter at so late a period; but at the same time must acknowledge, that in this case I frequently saw the pustule, which appeared perfect, and to go through its regular course.

"The subject of the other case is a child of Mr. Stokes, No. 12, Orange-court, Swallow-street, whom I inoculated five years ago, at a time when it was not thought of much consequence at what period matter was taken, provided a pustule, resembling a vac-

cine pustule, took place. Such a pustule took place in the present instance, and afforded matter for a considerable number of other successful inoculations; and those who were thus inoculated, have resisted the infection of the smallpox. I cannot, therefore, but consider it as having been a genuine case. The smallpox, in this instance and the former, as well as others, is so very benign for the natural sort, that I conclude it is modified and mitigated, though not totally prevented, by the preceding vaccination." [Ibid. p. 143.]

*Extracts from the Minutes of the Original Vaccine Pock Institution in London.*

"June 10, 1806. Anna Maber (No. 33 on Dr. Nihell's list), now ten years of age, attended the institution, with an eruption supposed to be smallpox. She was vaccinated at this institution four years ago, and there is a very distinct scar on the left arm. She began to be ill eleven days ago, and in three days a rash appeared. On the fourth day, an eruption followed, with abatement of the fever, and the rash disappeared. The eruptions continued to come out for some days, and the fever went entirely off. The eruptions are still out, but in a dried or scabbed state, and amount in number to some hundreds: they are more or less on the skin of every part of the body. The mother of the child says, that most of them did contain yellow matter: a few of the scabs are now the size of ordinary smallpox, but most of them not so large.

"At the same time attended Mary Maber, eight years old (No. 34 on Dr. Nihell's list); she was also inoculated at this institution at the same time with her sister above: a distinct scar remains on the arm inoculated. She sickened the day after her sister with similar symptoms, and in four days eruptions appeared, about twenty in number, the illness at the same time abating. The eruptions were the same in size and appearance as in the other.

"No doubt was entertained by the gentlemen present of these being cases of smallpox, which they appear to have taken from William Patterson, a child inoculated for the smallpox twenty-

two days ago, who sickened at the usual period of nine days, and had the smallpox in the ordinary way, with a copious eruption. These three children all lived together in the same room, while Patterson was under the small-pox.

“Both Anna and Mary Mabers, according to the mother’s account, underwent the chickenpox before vaccination, and both have had the measles since vaccination.

“The register contains the following report of these cases during vaccination.

“No. 33, Anna Maber, five years old, inoculated April 8, 1800, with eighth day matter, from Mary Burrell, No. 24; one puncture in left arm.

“8th day. One well-formed pustule—headach and fever on the seventh day, but now better.

“11th day. Pustule looks well, with broad red margin—has had headach and fever since the last report.

“13th day. Pustule black—beginning to dry up: very well since last report.

“No. 34. Mary Maber, three years old, inoculated from same patient and same day with the above: one puncture in left arm.

“3d day. Taken; no illness.

“8th day. A well-formed circular pustule, with red margin.

“11th day. Fine pustule, with great inflammation in the arm—has been poorly since last report.

“13th day. Pustule black and drying.

“14th day. Well.

“June 17. As an additional proof that the two Mabers were duly affected with cowpox, they were at the time selected for the inoculation of five children in one family; viz. Mr. Parker’s of Fleet-street, who also went through the cowpox, as was conceived, in a distinct manner, and were subsequently inoculated for smallpox by Dr. Pearson without effect. Farther; the two Mabers were inoculated with eighth day vaccine matter, as above stated, from Burrell, who was among the number of patients inoculated by this institution for smallpox after vaccination, and



exposed to variolous infection at the smallpox hospital two years ago, without effect. In looking over Burrell's case, it appears that he took chickenpox five months after vaccination, and yet was found insusceptible of smallpox, contrary to Mr. Goldson's suggestion." [Med. & Chirur. Review, vol. 13, p. cxv.

" May 8, 1807. Dr. Pearson reported that Dr. H—— had called upon him to communicate the following case of failure in the instance of his own child.—About five years ago the subject was inoculated from a person in the cowpock selected by Mr. K. of the Army Board and approved by Dr. B——, and in consequence the most distinct vaccinepock affection was produced. A few weeks ago it was thought proper to test the patient by inoculating it with variolous matter obtained from the smallpox hospital. This inoculation has produced the most distinct smallpox disorder, the eruptions being decidedly those of the smallpox, of which there are about forty large and fully suppured, besides a number of small ones not suppured. Mr. Bowen of Harrow and others of the faculty have seen this child in the smallpox. [Ibid. vol. 14, p. cxxxv.

" Oct. 6, 1807. Mr. Gemmell, surgeon apothecary, Princes-street, Drury-lane, attended to give information respecting some cases of failure of cowpock.

" 1st. In the family of Mr. Thorn, an upholsterer, Bear-yard, Lincoln's Inn Fields: one of his children was inoculated at Pancras hospital about three years ago; about nine weeks afterwards, Mr. Gemmell attended the same child in the smallpox, which was very distinct and full, and unquestionably smallpox.

" 2d case was in the family of one Weaver, 35, Stanhope-street, Clare-market. (See the particulars of this case below.)

" The 3d case is now in the scabbing state of smallpox, at No. 14, Banner's court, Drury-lane. This child had been vaccinated at the smallpox hospital.

" Oct. 13. Ann Weaver attended this day with her son, William Weaver, nearly six years of age, whose case is mentioned above by Mr. Gemmell, (No. 2.) She says he was inoculated

for cowpox by Mr. Wachsel, at the smallpox hospital, about three years and a half ago : the scars are visible, but faint. The case was considered by Mr. Wachsel at the time to be complete, and several other patients were inoculated from it. He was re-inoculated, however, for cowpox about four or five months after, because the mother was dissatisfied, conceiving there ought to have been eruptions. This second inoculation produced a sore arm for several weeks.

“ Three months ago this boy was taken ill of fever, followed by eruptions, which were seen and declared to be smallpox, of the confluent kind, by Mr. Wachsel, Mr. Mainwaring, Mr. Sutton, Mr. Lawrence, Dr. Moseley, and others. This boy had communicated a short time before his illness with persons in the neighbourhood labouring under smallpox.

“ Mary, the sister of the above, who had been vaccinated by Mr. Wachsel, fell ill five weeks ago, and had about twelve eruptions, the scabs of some of which remain at this time. Other children in the adjoining houses have since fallen ill of smallpox.

“ Oct. 26. A note was received from Mr. Gemmell, mentioning the case of a child of Moore, a taylor, residing at No. 17, Great Wild-street, Lincoln's Inn Fields, then lying dangerously ill of smallpox after vaccination. In consequence of this information, a governor of the institution made inquiry the following day into the circumstances of the case. He reported, that he found the child lying dead of confluent smallpox, which had proved fatal on the twelfth day. The father said the child had been vaccinated two years before at Dundee, by Dr. Crichton of that place, who had declared the progress of the vaccine affection to be perfectly regular, and had in consequence taken matter from it to inoculate another child of the name of Scott. A distinct scar remained on the arm, and was visible at the time of the child's death. It was seen in the smallpox by Dr. Harworth, Mr. Gemmell, and several other gentlemen.

“ Nov. 6. Dr. Pearson reported, that he had visited a child of the name of Beasly, between three and four years of age, residing at No. 49, Upper Rathbone-place, who was just recovering

from smallpox, so severe as to have been in considerable danger. The eruption was universal, but distinct, and the pustules large and perfectly characterized. The eruption was now in the tenth day, and had not yet completely matured on the extremities. This child was vaccinated two years and ten months ago, viz. in January 1805, by Mr. Griffiths, of St. George's Hospital, and went through the disease to his satisfaction. Distinct scars remain on the inoculated parts. It is worthy of remark, that the cicatrices were quite free from pustules, although almost every other part of the skin was covered with them. The same thing has been observed in other cases.

" Dr. Clutterbuck this day reported, that he had seen, two days ago, the child of Mr. Stiles, No. 7, Lamb's Buildings, Bunhill-row, then lying dead of smallpox. The disease was of the most malignant character, the pustules in general remaining flat and empty, interspersed during life with numerous purple spots. They were confluent only about the face. Many vesicles containing bloody serum were scattered over the skin.

" This child had been vaccinated at the Golden-lane Jennerian station, by Mr. Lewis Leese, surgeon, and was registered as having gone regularly through the disease. The scar on the inoculated part was perfect.

" Nov. 24, Robert Purdy, of 45, Upper Rathbone-place, attended the institution this day with his daughter, Sarah Purdy, aged four years and two months. This child has now an eruption of pustules amounting to several hundred, pretty generally diffused over the whole body, and which first made their appearance five or six days ago, after three or four days illness, with fever. The pustules on the face are now nearly in a state of maturation: those on the extremities are less forward. The gentlemen present, five in number, are unanimously of opinion that it is smallpox.

" The father says, that the child was vaccinated by Mr. Addington, of Spital-square, four years ago next January, at the Jennerian station in that neighbourhood, and went through the affection regularly. There is a distinct scar on each arm from vaccination.



"A younger child in the same family has just gone through the smallpox, having been inoculated three weeks ago at the smallpox hospital. The smallpox has been also prevalent in the neighbourhood for several weeks past."

[Ibid. vol. 15, p. cxxv.]

Cases like these warrant hesitation and have in the minds of many excited serious doubts respecting the utility of vaccination.

It should however be noted that in most of the cases, where the vaccine disease has exhibited its proper characters, the subsequent variolous affection is evidently modified and rendered much more mild by the vaccination. In short where the smallpox has not been prevented by the vaccine pock, it has been disarmed of its terrors.

But the advantages of vaccination are to be determined by a comparison of this practice with that of inoculation for smallpox.

The advantages of variolous inoculation were these ; first, that the disease produced by it was very much more mild and less mortal, than when the same disease was produced by casual contagion ; and secondly, that the disease having been once produced, by whatever means, it will not occur again in the same subject. Both these laws are generally so true that they have long ceased to be controverted. But to them both there do, although rarely, occur exceptions. In some cases the smallpox produced by inoculation is very severe and even mortal. Likewise in some cases those who have undergone that disease, whether in one way or the other, have subsequently suffered from the same again in a greater or less degree. It is observed in almost every smallpox hospital, that the nurses are subject to variolous pustules especially in those parts, which have been in contact with the pustules of others. In these cases the disease has sometimes been so severe as to occasion symptoms of irritation, or secondary fever. But other cases well attested have been published, in which persons are stated to have undergone the whole of the variolous disease a second time, in a manner not to be doubted. That is, they have had variolous eruptions following the regular symptomatic fever. In support of this state-

ment the committee refer to the authorities subjoined, and have also selected the cases which follow as being particularly worthy of regard. Willan on Vaccine Inoculation. Ring on Cowpock. Med. & Phys. Journal, vol. 13. p. 570. Vol. 14. pp. 7, 176, 251, 404, 405, 407, 436. Vol. 15. pp. 436, 441, 442, 443, 444. Vol. 18. pp. 314, 315.

*"To the Editors of the Medical and Physical Journal.*

"GENTLEMEN,

"Thinking the following account of the second appearance of smallpox in the same person, interesting; and that it may be usefully conveyed to the publick, through the medium of your very useful and widely circulated Journal, I have sent it for insertion. I am, &c.

"EDW. LEESE.

*"East Street, Manchester Square,  
August 18, 1805."*

"Mrs. PIDGEON now living as housekeeper with Mr. Jarnet, of David Street, the corner of East Street, Manchester Square, informs me, that her late husband, when about fifteen years of age, then residing as a gardener with Capt. Markall, of Honiton, in Devonshire, was inoculated for the smallpox by Mr. Buller, a surgeon of that place; that his arm inflamed very much; and that it was succeeded by a thick eruption of pustules all over his body; his feet were so full of them, that he was unable to stand. He was for some time confined; and so very ill, that Dr. Robinson, of Honiton, was requested to see him. Dr. Robinson and Mr. Buller continued to attend him till his recovery, without expressing any doubt of the nature of the disease.

"Some years after, a lad in the same family had the small pox; during the progress of which, he slept with him, and received no inconvenience.

"When he was about twenty-eight years of age, his own children had the smallpox; of which one died. He lived and slept with them, and at length was taken so ill, as to be obliged to leave his work; complaining of sickness, head-ach, and severe pains in his back. The medical gentleman attending the chil-

dren was sent to; who observed, that if he had not already had the smallpox, he should think he was then sickening for it. After an illness of two or three days, a full eruption of the confluent smallpox made its appearance; of which he died on the eleventh day." [Med. & Phys. Jour. vol. 14. p. 251.

*" Copy of a Letter from the Earl of Westmeath, to Dr. Jenner, dated May 23, 1805.*

" SIR,

" Understanding that a report has been circulated, which, if believed, would tend much to weaken that confidence, which is at present so generally and so justly entertained by the public, in your system of inoculation for the cowpox, namely, that my youngest son had taken the natural smallpox, after having been vaccinated, I think it but justice to you to contradict the report; and to state, for your satisfaction, the real circumstances of the case, which are as follow :

" When he was about two months old, he was inoculated for the smallpox, in the Suttonian method, by a physician in Ireland, who has been very generally successful in inoculation, and pronounced by him to be perfectly free from the risk of infection; notwithstanding which, he caught the infection, about a fortnight since, and is now recovering from the natural smallpox.

" I beg to inform you, at the same time, that my youngest daughter, who was vaccinated by you, about four years since, has not only been frequently exposed to the danger of infection, but was actually inoculated for the smallpox, without taking it. I have considered it incumbent on me to bear testimony to the efficacy of the vaccine system, as I consider the report relative to my son, which originated in misrepresentation, to have been circulated for purposes obviously prejudicial to that most useful and fortunate discovery.

" I request you will make any use of this communication, which you may think necessary.

" I am, Sir,

" Your obedient humble servant,

" WESTMEATH."

[Ibid. p. 256.



*" Arundel, September 13, 1805.*

" SIR,

" I yesterday received your letter, and shall be happy if any information I can give, concerning a person's twice having had the smallpox, should contribute towards removing the doubts which exist, of the superiority of vaccination.

" In the year 1738, the smallpox committed its furious ravages in this place, and is said to have destroyed one out of every seven whom it attacked. Amongst the number of infected was William Birt, at that time about eighteen months old. It has been a tradition here, as long as the oldest of the inhabitants can remember, that this boy was supposed to have been dead ; and that his body was purchased by Mr. Birch, a surgeon, for the purpose of dissection. He, however recovered ; and for the rest of his days, was a living monument of the havoc the disorder had made. I knew him well ; and do not recollect many instances of a person more fretted and seamed by the smallpox than he was.

" The marks he bore, were deemed a sufficient security against any future infection of the smallpox. He was therefore appointed to attend on variolous patients in the pesthouse ; a kind of lazaretto at the skirts of the town.

" One woman died of the smallpox in the house, on the 15th of February, 1799, and another a few days after. William Birt, the subject of your inquiries, sickened on the 28th of the same month ; and the eruption appeared on the fourth day. I saw him on the sixth day of the disease, being sent for by the family to give my opinion on the possibility of its being the smallpox ; which none of them could believe, from the evident marks of his having had the complaint.

" On inquiry I found, that he had been exposed, a short time before, to variolous contagion ; and that his disorder commenced with the symptoms usually attending the worst kind of the smallpox. The eruption was confluent ; and his throat was severely affected. He was removed from his home, on the day I visited him, to the pesthouse ; where he died on the twelfth day of the disease.

"If this detail can be of any service, I beg you will accept it, with my sincere wishes, that it may contribute towards the advancement of your pursuits.

"I am, &c.

"WILLIAM PLOWDEN.

"MR. RING."

[Ibid. p. 404.

*Extracts from a paper by Mr. Ring.*

"The two following cases were communicated to me by Dr. Jenner; and published in my answer to Mr. Goldson. Mr. Fewster of Thornbury, the celebrated inoculator, had the smallpox in his youth, and was exposed to the infection with impunity for forty years; yet, happening to wound his finger with the point of a lancet, charged with variolous matter, the puncture inflamed and suppurated; and he had a considerable number of pustules on his forehead.

"Mr. Scott, another surgeon in the same town, had the smallpox by inoculation; which proved to be of the confluent kind. Nevertheless, he caught it again twenty years after, from a patient whom he was attending; and had it with some degree of severity.

*"Princes Street, Cavendish Square.*

"SIR,

"I have sent you four cases, containing a plain narrative of facts. I cheerfully submit them to you, from a conviction that they will be employed, as far as they are capable, for the advancement of truth and science.

"I am, &c.

"WILLIAM ROYSTON."

*"Cases of casual Smallpox succeeding to the inoculated disease, after an interval of nineteen years.*

"Sarah and Mary Taylor were inoculated for the smallpox; Sarah when two years, and Mary when four days old. Sarah was inoculated by a Mr. Richardson, who was engaged in practice with, or was a pupil of Sutton. She had but few pustules,

and those faded early, but she was pronounced safe. Mary was inoculated by Mr. Robert Muriel, a respectable country practitioner, and the virus which he used was taken from a person who had the disease by inoculation. She went regularly through the distemper, had a considerable crop of pustules, and an indelible mark remains in her arm where the matter was inserted. During a period of nineteen years these young women, perhaps, were not exposed to the smallpox contagion ; but at the end of that time, in February 1788, a general inoculation took place in the village where they resided. Sarah was then attacked with the casual disease ; the pustules were confluent in her face, but distinct in other parts ; she was blind some days. Mary took the disease at the same time ; the pustules on her were numerous but distinct, and turned on the second day.

*“ Case of Smallpox occurring a second time.”*

“ Mary Feakins, of Somersham in Huntingdonshire, had the smallpox in the year 1769, the disease being then very general in the neighbourhood. It appeared in her in its severest form, and she suffered extremely. When she was attacked with the complaint she nursed an infant daughter, then six weeks old, who took the smallpox from her mother, had a confluent kind, was much marked, and lost an eye. In the year 1788, when this daughter was nineteen years old, on being exposed to the accumulated contagion of the smallpox, she was again attacked with the disease ; and I attended her. This second attack was not of the slight kind which has been observed to occur in nurses. The eruptive fever continued four days ; there was considerable inflammation about the fauces ; the number of pustules in her face amounted nearly to two hundred, with a proportionate crop over the surface of the body. The pustules on the face arrived at the acme of maturation on the seventh day from their appearance. Swelling in the face closed the eyes ; the extremities were tumefied, and some degree of ptyalism took place. The accumulated effluvium to which this girl was exposed occurred from her sleeping in the same room with three younger sisters, who



were down with the disease, one with the casual sort, and two by inoculation."\* [Ibid. vol. 15, p. 442.]

This doctrine, that the small-pox will sometimes occur twice in the same subject, is not new; although it has been controverted by great authorities;† but the occurrence is so rare, that it has not been found during the experience of nearly a century to constitute any serious objection to variolous inoculation. For in the first place, the question is not whether those who have had the smallpox once are capable of being affected at all by variolous matter, but whether they are *secure against severe affections* by the application of that matter to them. If, when they have once undergone the disease, whether produced by casual infection or by inoculation, they are not liable to suffer severely from it again, and if the disease, when produced in the latter mode, was far more mild and safe, than when produced in the former, the utility of inoculation was sufficiently decided. Such was found to be the case generally. If one exception has occurred to this general rule in a thousand cases, and even if every person should die, who experiences a second attack of the disease, such rare exceptions could not form any objection to the practice of inoculation. The truth has been much more favourable than these suppositions represent it.

The advantages of variolous inoculation therefore have long ceased to be questioned, and even these objections to the practice were almost forgotten, till the contest respecting the vaccine disease has revived the consideration of them.

If the vaccine disease affords equal or nearly equal security with the variolous, it must be needless to point out its superior

\* The cases of Diemerbrook, and that of Withers in the 4th vol. of the Memoirs of the London Medical Society, have often been quoted. Mr. Ring remarks "it is worthy of notice that in almost every instance where I have inquired into a failure, or supposed failure, in the inoculation of the cowpock, I have heard of a failure, or a supposed failure, in the inoculation of the smallpox." By *failure* he means a failure to give security from smallpox.

† Sir William Watson, Dr. Archer, Baron Dimsdale, and Mr. William Sutton. See Med. and Chir. Rev.

advantages in other respects. "It is equally safe at all ages and in every season, and does not occasion confinement; it neither diffuses contagion nor excites scrophula; and it is free from the danger attending the inoculated smallpox, which still proves fatal in one case out of two hundred and fifty." That it does in the great majority of cases afford a temporary security is so generally admitted even by its opponents, that on that head it would be useless to adduce proofs. Let it suffice to state the principal objections to the practice, which have been made by the most sagacious antivaccinists, and to describe the methods which have been proposed to obviate even the few evil consequences, which are attendant upon it.

The objections are, first that the security it affords is not permanent; second, that the occurrence of other contagious diseases, as hooping cough, measles and chickenpox, in persons who have been vaccinated will restore the susceptibility of variolous contagion; third, that although the genuine cowpock may secure its subjects from smallpox, yet its character is so imperfectly marked, that few if any practitioners are capable of determining them with precision and certainty; fourth, that it is productive of horrid and loathsome diseases, which occasion protracted sufferings and sometimes death.

We may first remark that these objections are precisely similar to those, which for a long time delayed the universal adoption of variolous inoculation.

To the first objection, the want of permanence in the security afforded by vaccination, Dr. Jenner long since offered a sufficient refutation by giving a list of persons, who had been many years before casually inoculated and had undergone the cowpock, and who still resisted smallpox. Among many cases, which have since been adduced to corroborate his statement, none is more satisfactory, than those of Mr. Jesty, an English farmer, and his family. This man seems to have been among the first\* who ever practised vaccine inoculation by design. Having been ac-

\* There is an account of similar instances on the continent of Europe, as early and earlier.

cidentally inoculated with the cowpock himself and experienced the benefits of the consequent security from smallpox, he inoculated his wife and two sons with virus taken from the cow in the year 1774. One of these sons, Mr. Robert Jesty, was inoculated with variolous matter in London in the year 1805, thirty-one years after vaccination, and was found unsusceptible of smallpox.\* The father and all the family had frequently been exposed to the smallpox before, and the two sons had been inoculated for it in the year 1790, and in every instance without effect.†

The second objection, that certain contagious diseases following the cowpock restore the susceptibility of smallpox, does not carry with it the semblance of truth; and it is refuted by direct observations. Dr. Willan after relating cases of smallpox subsequent to vaccination, and noticing this objection says, "I have found, on inquiry, that more than half the children above-mentioned, who took the smallpox after vaccination, had been intermediately affected with the measles, chickenpox, scarlet fever, cynanche parotidæa, or whooping cough, but that in the rest there had not been any intervening disease. The changes of constitution produced between infancy and adult age, might, with as much probability, be supposed to remove the effects of the cowpox. This, however, is not the case in the natural cowpox, nor are adults less liable than children to failures in vaccination."

Dr. Willan refers to some observations on this subject by

\* Med. and Chir. Rev. vol. 12. p. lxviii. miscellaneous.

† Mr. Jesty's experiments were made more than twenty years before those of Dr. Jenner. While these cases make a valuable addition to the testimony in favour of vaccination, the limited and unpublished experiments of Mr. Jesty do not detract in the slightest manner from the claims of Dr. Jenner on the respect and gratitude of mankind for having originated the practice of vaccination. Mr. Ring says, "Dr. Jenner never has claimed the merit of discovering the prophylactic power of the vaccine virus: but he is fully entitled to the praise of converting that discovery to general advantage." Dr. Jenner discovered to the world that this light was hid under a bushel.



Dr. Stanger of the foundling hospital in London. Dr. S. after relating the cases of twenty-one children in that hospital who resisted the smallpox after vaccination adds the following remarks, "The same twenty-one patients also supply the most satisfactory evidence to invalidate Mr. Goldson's supposition, that eruptive diseases may remove the security derived from cowpox. During the period which intervened between their being vaccinated in March 1801, and variolated in November 1804, six of them had scarlet fever and four measles. Ten of them had whooping cough also, which proves that these contagious febrile disorders, which so powerfully affect the constitution, have no influence in diminishing the efficacy of vaccination. As the first inoculation with variolous matter, in 1802, produced no constitutional affection, it cannot supply an argument against the durability of the antidote for three years and a half." Other authorities might be adduced to the same point.

The third objection recounted above states the difficulty of determining when the disease is genuine. This objection was in some measure just in the first years of vaccination, and great care is requisite to prevent it from being so at all times. The appearances at the part inoculated are alone to be relied on in determining whether the cowpock is or is not perfect. When the disease takes place in its most regular form, as with due care will happen with very few exceptions, no one will feel any hesitation, who has had a tolerable share of instruction on the subject. But there are observed in persons inoculated for cowpock appearances varying from those of the true disease; and these variations are in different respects and in different degrees. It does perhaps require considerable experience to gain an acquaintance with every anomaly which occurs in vaccine inoculation. But the safe course is to note down every case, which is doubtful, and at the end of six or twelve months to repeat the insertion of vaccine virus. The necessity of this precaution cannot be estimated too highly. The committee think it so important to point out the true distinctions, which must determine our judgments on this subject, that they have quoted at large the remarks

relative to it from two late writers ; the one Dr. Robert Willan, the accurate and faithful observer of cutaneous diseases ; the other Dr. Joseph Adams, the ingenious and scientific writer upon morbid poisons ; than whom perhaps no two men now existing are of higher authority in the case of a morbid poison producing its effects on the skin.

*Directions for performing vaccination and a description of the regular appearance of the disease.*

“ The general directions already given in smallpox inoculation, as far as they are applicable, may serve in cowpox : but the most important consideration is carefully to avoid using fluid in the smallest degree turbid. True vaccine fluid is so perfectly transparent, that on fine glass, or even on the point of a fine lancet, it cannot always be perceived. For the most part it escapes very slowly from the puncture made through the cuticle ; not being like the fluid of a blister contained in a single bag, but in a number of small cells communicating with each other. When it escapes in this gradual manner, it sometimes forms itself into a spherical shape, and retains its figure like a perfectly transparent jelly. There are, indeed, some varieties in this respect depending on the age of the vesicle, and the degree of inflammation with which it was attended ; but there is no exception as to its crystalline transparency.

“ It is generally thought best to take the fluid before the eighth day ; but when this is done the vesicle *from which we take it* should be watched till scabbing, for if without other violence than the above puncture, the contents should become matter or the scab soft, we ought not to depend on the issue of our vaccination, but to take another opportunity of repeating it.

“ 2dly. The pure matter taken as above, should be inserted at the end of a clean lancet, by a simple incision. It is not always easy nor important to avoid drawing a little blood. No means whatever for retaining the fluid, either of bandage or plaster, being used, the blood, if any escapes, should be suffered to dry on, as the best dressing for the little wound.

“ On the following day it will sometimes not be easy to ascer-

tain whether our inoculation has succeeded, but on the next, being the third, inclusive of the day of inoculation, you may perceive a red point which, being pressed by the finger, will give the sensation of a very small hardness immediately under the skin.

“ On the fourth day the point should be increased, and somewhat shaded or radiated. On the fifth a small vesicle or bladder may sometimes be perceived with the naked eye. On the sixth with still more certainty. This is gradually increased in size, the base rarely exceeding the summit, till the eighth or ninth, when the almost level summit will for the most part, exceed the base. During the whole progress a small indentation will usually appear, preserving the form of the incision.

“ Hitherto the appearance is very similar to smallpox, and in some cases cannot be distinguished from it. But from this time the difference is easily marked excepting in one kind of smallpox. In all others the inoculated part, however regular it may have proved till the eighth or ninth day, now becomes jagged at its edges, and its contents grow more or less purulent. In the cowpox the circular form continues, or if from the length of the puncture the form should be more oblong, still the edges will be well defined, the contents remaining limpid.

“ The external skin seems to thicken as the vesicle acquires its full size, and gradually approaches nearer to the amber colour. At other times the skin seems more transparent, and shows a blue tint beneath it. On these occasions the vesicle is flatter. This difference appears to arise from a higher degree of inflammation, in consequence of which the surface below is fuller of vessels conveying red blood, and affords a purplish appearance through the cuticle and lymph.

“ On one of these or the following day a considerable redness appears round the vesicle ; this has been very properly denominated by Dr. Jenner the *areola*, or *small area*, round the vesicle. If this redness or areola has a well-marked edge at the extremity it never exceeds the boundary it first formed for itself ; but if it is deepest immediately round the vesicle and shaded from thence, its extent is much more uncertain ; though from the eighth or



ninth day the skin appears to thicken, and the vesicle to flatten, excepting round the edge, yet the contents are still limpid. The edge now forms a rim higher than the centre, so that the whole has been very well compared to a ripe mallow-seed. The surrounding redness ceases from day to day, the margin of the mallow-seed shrivels, the centre acquiring a crustaceous, and afterwards a stony hardness, at the same time gradually contracting itself, particularly round its extremities, so that the centre is generally most elevated, and the whole scarcely fills the little cavity in which it is contained. In this state it has been compared to a tamarind stone. This illustration, though for the most part correct, is less so than that of the mallow-seed, because the appearance of the scab is more various. It is, however, if uninterrupted, constantly stony, but varies in colour as much as the different shades of mahogany. In this state it remains sometimes for two or three weeks, and when it falls off leaves a scar which though not deep, has in all the cases I have seen, proved permanent like the smallpox. From the latter it differs not only in being more superficial, but in being marked with small and somewhat regular indentations. There is some variety in this appearance, which will hereafter be noticed.

“When the progress has been so far regular, the patient has every security against the smallpox which our present knowledge affords. We shall hereafter take notice of certain deviations distinguishing between such as are consistent with the security of the patient, and such as render it doubtful.”

[Adams on Vaccine Inoculation, p. 110.]

“*Deviations from the customary laws of vaccination.*”

“Whenever we find it difficult to ascertain on the third day by the marks already described, whether our operation has proved successful, we should first examine the general state of health. If any symptoms of fever occur, we may be sure that the effect of vaccination is superseded by some other disease; and if our patient has been exposed to the measles or chickenpox the probability is, that he may go through one of those diseases before the progress of vaccination commences. In this manner the

vesicle after being formed, may be arrested at any future period before the sixth day and afterwards resume its action when the cause which interrupted it ceases. If the patient has been exposed to small pox and the feverish disposition should arise from that cause, the cowpox insertion will rather be hastened in its progress. It will afterwards proceed with the smallpox pustules retaining its proper figure, but without that surrounding redness which marks its genuine character.

“ But if we find no progress in the arm after the third day, nor any symptoms of fever, we should examine whether our patient has any other local complaints about him. Whether he has eruptions of any kind, and if it should be an infant, about the ears particularly. Whatever may be the issue of our examination we should repeat our insertion, as it cannot be attended with any injury. It will often happen that the second inoculation will not only succeed, but that the first will begin its progress at the same time, and both will go through the regular stages together. On all these occasions a more than ordinary attention is necessary to the progress of the vesicle, for these are the cases which have brought vaccination into the greatest discredit.

“ It will sometimes occur that after the inoculated part has proceeded to a certain height with its true character, it will suddenly assume the purulent appearance of any other eruption about the body. In this case we cannot expect the constitution to be secure, as the vaccine vesicle has not gone through its necessary stages. At other times the vesicle will complete its stages and at the end of the second, or beginning of the third week, or about the period when the scab is completed, the distant eruptions will assume the vaccine character, and heal in a few days after. In the last case we can have no doubts of the security of our patient, but as was before observed whenever the inoculated part becomes purulent from this or any other cause, it is absolutely necessary to vaccinate again.

“ If after repeating our vaccination, on account of the backwardness of the first, we find the same difficulties in the second, we may make a third attempt, but if this should fail also, the

health of the patient should be attended to, and, when restored, the attempt may be renewed. If there is no apparent obstacle in the health, we should still defer our insertion for a few months, and after repeating it then, if the same difficulties remain, we must leave it to the patient to determine when and whether he will wish to make any future trial. At the same time we should inquire whether any others of the family have resisted every exposure to smallpox infection and every attempt at inoculation.

“ It is generally said that vaccination produces no local effects but at the part to which the fluid is inserted. This is for the most part true ; but it is unquestionable that what are called secondary vesicles do sometimes occur : that is, an eruption of vaccine vesicles at distant parts of the body in the manner that smallpox pustules appear after the inoculation of that disease. It has been urged by some that these eruptions after cowpox are the effect of a second inoculation by the patient carrying the fluid of the first to a distant part. But this is easily distinguished. When matter is carried in this way, the vesicle formed always finishes its progress at the same time as at the part first inoculated : whereas secondary vesicles never *appear* till the close of the second or beginning of the third week, when the original vesicle has begun to scab.

“ Besides these secondary vesicles a number of small hard elevations sometimes occur at different periods of vaccination, most commonly at the commencement of scabbing. They are of no consequence, and subside without any other than the common remedies.”

[Ibid. p. 123.]

*“ On the characteristics and effects of perfect vaccination.*

“ Vaccination is accounted perfect, when recent lymph has been carefully inserted beneath the cuticle, in a person free from any contagious disorder, and has produced a semi-transparent, pearl-coloured vesicle, which after the ninth day, is surrounded by a red areola, and afterwards terminates in a hard, dark-coloured scab.—The form and structure of this vesicle is peculiar. Its base is circular, or somewhat oval, with a diameter of



about four lines on the tenth day. Till the end of the eighth day, its upper surface is uneven, being considerably more elevated at the margin than about the centre, and sometimes indented by one or two concentric furrows, but on the ninth or tenth day the surface becomes plane, and in a very few instances the central part is highest. The margin is turgid, firm, shining, and rounded so as often to extend a little beyond the line of the base. The vesicle consists internally of numerous little cells, filled with clear lymph, and communicating with each other. The areola, which is formed round the vesicle, is of an intense red colour. Its diameter differs in different persons from a quarter of an inch to two inches, and it is usually attended with a considerable tumour and hardness of the adjoining cellular membrane. On the eleventh and twelfth day, as the areola declines, the surface of the vesicle becomes brown in the centre, and less clear at the margin. The cuticle then begins to separate, and the fluid in the cells gradually concretes into a hard rounded scab of a reddish brown colour. This scab becomes at length black, contracted, and dry, but it is not detached till after the twentieth day from the inoculation. It leaves a permanent circular cicatrix, about five lines in diameter, and a little depressed, the surface being marked with very minute pits or indentations, denoting the number of cells of which the vesicle had been composed.

“ During the progress of the vesicle some disorder takes place in the constitution, and there is frequently on the arms and back a papulous eruption resembling some forms of the Lichen and Strophulus. These circumstances we should by analogy judge desirable; but they do not always occur, nor are they deemed requisite to ensure the full effect of vaccine inoculation,—that effect, which, as ascertained and announced by Dr. Jenner, is allowed to be more important than any event which the history of medicine can furnish.”

[Willan on vaccine inoculation, p. 9.

“ *On imperfect vaccination.*

“ Vaccination is imperfect, or insufficient, I. When the fluid employed has lost some of its original properties. II. When

the persons inoculated are soon afterwards affected with any contagious fever. III. When they are affected, at the time of inoculation, with some chronic cutaneous disorders.

“ I. The qualities of the vaccine fluid are altered soon after the appearance of an inflamed areola round the vesicle : and the fluid, although taken out of the vesicle in the best possible state, may be injured by heat, exposure to air, moisture, rust, and other causes.

“ When scabs are formed over variolous pustules, and vaccine vesicles, the matter they afford is often acrid and putrescent, and, if inoculated, it perhaps neither communicates the vaccinepock, nor the smallpox, but produces a fatal disease, with symptoms similar to those which arise from slight wounds received in dissecting putrid bodies. Should the pustules of smallpox remain entire till the twentieth day of eruption, matter taken from them, even at that period, will sometimes communicate, by inoculation, the disease in its usual form, though perhaps with considerable virulence. We are, however, now assured on good authority, that matter improperly kept, or the thick matter taken from collapsed and scabbing variolous pustules, and used for the purpose of inoculation, does not always produce the smallpox, nor prevent the future occurrence of that disease, although the persons inoculated may have had inflammation and suppuration of the arm, and pains in the axilla, with fever and eruptions on the ninth or tenth day. In like manner if the vaccine fluid employed be taken at a late period, as from the twelfth to the 18th day, it does not always produce the genuine cellular vesicle, but is in some cases wholly inefficient, while in others it suddenly excites a pustule, or ulceration, in others an irregular vesicle, and in others erysipelas. Similar appearances are observed, when fluid taken from a perfect vesicle on the sixth, seventh, or eighth day has been injured, before its application, by some of the causes above enumerated. In addition to them, I may observe that if the vesicle be ruptured, at an early period, by friction, or scratching, the inoculation sometimes proves imperfect. Failures may have also been occasioned by repeatedly puncturing,

or draining the vesicle, on two or three successive days. The fluid, which is afterwards secreted into the cells thus exhausted, may, by a difference of properties, or by too much dilution, be rendered incapable of acting fully, either on the person from whom it is taken, or on those to whom it is communicated. Some of the early failures, in persons inoculated at different publick institutions, are perhaps referable to this cause, the demands for vaccine fluid in 1799, and 1800, having been very numerous, the cases to supply them comparatively few.\*

“ II. Eruptive fevers and other febrile diseases, interfere with the progress of the vaccine vesicle. The measles, scarlatina, varicella, typhus, and influenza, appearing soon after vaccination, either render it ineffective, or suspend the action of the virus, so that, in some cases, the progress of the vesicle is very slow, and the areola is not formed till the fourteenth day or later, and sometimes not at all. Dr. Jenner has recorded the case of a child, on whom the scarlatina, with a sore throat, appeared on the ninth day of vaccine inoculation. The vesicle enlarged as usual, ‘yet there was a total suspension of the areola, until the scarlatina had retired from the constitution.’ In a sister of this patient, the fever and scarlet efflorescence took place faintly on the same day, but suddenly disappeared, the areola having been formed round the vesicle. Four days afterwards, on the decline of the vesicle, the scarlatina anginosa returned with its usual symptoms.

“ III. The cutaneous diseases which sometimes impede the formation of the genuine vaccine vesicle,† are herpes (including

\* It is an useful caution to vaccinate in two or three places, and to puncture only one of them to procure the virus: that is to allow at least one vesicle to go through its whole course undisturbed.

† “ Variolous inoculation sometimes fails from the same cause. See Dr. Jenner, and Mr. Hill, *Med. and Phys. Journal*, for June, 1805. Compare the *Journal* for May, 1803, and Aug. 1804.

“ Dr. Jenner has favoured me with the following instance:—‘ The child of a gentleman at Blakeney, Gloucestershire, was at two years of age inoculated for the smallpox with others of the same family. In this child, there was a deviation from the usual appearances: the arm inflamed and suppu-



the shingles and vesicular ringworm), the dry and the humid tetter, and the lichen, but especially the porrigo (or tinea) comprising the varieties denominated *crusta lactea*, *area*, *achores*, and *favi*, all of which are contagious. To these perhaps should be added the itch and prurigo.

“ Imperfect vaccination is not characterized by any uniform sign or criterion, but exhibits, in different cases, very different appearances, as pustules, ulcerations, or vesicles of an irregular form. The vaccine pustule is conoidal; it increases rapidly from the second to the fifth or sixth day, being raised on a hard inflamed base, with diffuse redness extending beyond it on the skin. It is usually broken before the end of the sixth day, and is soon after succeeded by an irregular yellowish brown scab. The redness disappears within a day or two, and the tumour gradually subsides. According to Dr. Jenner, ‘ Its commencement is marked by a troublesome itching, and it throws out a premature efflorescence, sometimes extensive, but seldom circumscribed, or of so vivid a tint as that which surrounds the pustule (vesicle) completely organized; and (which is more characteristic of its degeneracy than the other symptoms) it appears more like a common festering produced by a thorn, or any

rated, but not extensively: some slight indisposition took place, and a few pimples were scattered over the skin, which did not suppurate. The parents not being quite satisfied, the child was inoculated a second time, with variolous matter, about two years afterwards, when the appearances on the arm, and the disorder of constitution, recurred as at first. Soon after this time, the child was put to bed with a person who had a full burthen of small-pox, but was not infected. When two years more had elapsed, the child was vaccinated by Mr. Lauder, an experienced and respectable surgeon at Newnham. The puncture produced only an incomplete pustule, surrounded by considerable inflammation. Mr. Lauder then consulted me, and on my making inquiry respecting the state of the skin, he told me that the child, from its early infancy, had been affected with eruptions on its head, and other parts of the body. Feeling satisfied that he had thus accounted for the preceding circumstances, I endeavoured first to subdue the eruptions. As soon as this was accomplished, the child was again vaccinated, when a pustule appeared, which went through all its stages, with the most perfect regularity and correctness.”

other small extraneous body, sticking in the skin, than a pustule (vesicle) excited by the vaccine virus. It is generally of a straw colour, and when punctured, instead of the colourless transparent fluid of the perfect vesicle, its contents are found to be opaque.\*

“ Respecting the ulceration, Dr. Jenner observes, ‘ In a late case, the punctured part on a boy’s arm (who was inoculated with fresh limpid virus,) on the sixth day, instead of shewing, as usual, a beginning vesicle, was incrustated over with a rugged amber-coloured scab. The scab continued to spread and increase in thickness for some days, when at its edges a vesicated ring appeared, and the disease went through its ordinary course, the boy having had soreness in the axilla, and some slight indisposition. With the fluid matter taken from his arm, five persons were inoculated. In one, it took no effect ; in another, it produced a perfect vesicle ; but, in the other three, the progress of the inflammation was exactly similar to the instance which afforded the virus for their inoculation : there was a creeping scab, of a loose texture, and subsequently the formation of limpid fluid at its edges.’\* ”

“ Dr. Woodville has mentioned a similar appearance, and considers it as indicating an ineffectual inoculation.

“ He refers ‘ to cases in which it happens, that though the local affection does not exhibit much more inflammation than is usual, yet neither vesicle nor pustule supervenes, and, in which, about the sixth or seventh day, it rapidly advances into an irregular suppuration, producing a festering or crustaceous sore.’ ”

“ These ulcerations probably originate from the vaccine pustule, which on account of the itching it excites, is sometimes scratched off at a very early period, or being prominent and of a loose texture, is injured and exasperated by the friction of the clothes, &c.

\* “ Dr. J. remarks elsewhere, ‘ In some instances, the ring of vaccine fluid fixed a boundary to the extension of the scab, the efflorescence followed, and the constitution was found secure from the smallpox ; but in other instances, the process ended more abruptly, and then of course the susceptibility of the vaccine virus remained, which was proved by subsequent inoculation.’ ”

“Inoculators are now generally acquainted with the pustule and ulceration above described; but the chief nicety and difficulty of vaccination, is in distinguishing from the genuine vesicle, some irregular vesicles, which have often been mistaken for it, and which do not wholly secure the constitution from the smallpox.

“I have observed three sorts of these irregular vesicles. The first is a single pearl-coloured vesicle, set on a hard dark red base, slightly elevated. It is larger and more globate than the pustule above represented, but much less than the genuine vesicle: its top is flattened, or sometimes a little depressed, but the margin is not rounded or prominent.\* The second appears to be cellular like the genuine vesicle, but it is somewhat smaller, and more sessile, and has a sharp angulated edge. In the first the areola is usually diffuse, and of a dark rose-colour: in the second it is sometimes of a dilute scarlet colour, radiated, and very extensive, as from the sting of a wasp; at other times it has the form and colour exhibited Pl. I. No. 7.† The areola appears round these vesicles on the seventh or eighth day after inoculation, and continues more or less vivid for three days, during which time the scab is completely formed.‡ The scab is smaller and less regular than that which succeeds the genuine vesicle; it also falls off much sooner, and, when separated, leaves a smaller

\* “A vesicle of this kind appeared in the vaccination of Miss Georgiana Whitworth (M. and P. Journal, August, 1801. See the last note.) ‘It was,’ according to Dr. Fawcett, ‘more globular, and seemed to have a thinner pellicle than the genuine cowpock.’

† All these remarks are illustrated by coloured engravings in Dr. Willan’s work, which we regret very much that we cannot imitate.

‡ “Mr. Whately has well described an irregular vesicle as it occurred after inoculation, in two persons who had previously had the smallpox. “A slight inflammation took place round the punctures on the second day, and gradually increased to the ninth, when its appearance was erysipelatous, and its extent round the vesicle was at least a hand’s breadth. It had not the areola usually met with in the cowpock; but in two places there were red lines of the breadth of a finger, in the course of the lymphatics. On the eighth day



cicatrix, which is sometimes angulated.—The third irregular appearance is a vesicle without an areola.

“The vaccine pustule, and ulceration, may sometimes arise from the insertion of effete or altered virus; but they mostly occur in persons labouring under the eruptive complaints mentioned page 117.\*

“The irregular vesicles are produced by some of the causes enumerated page 115-6.—The vesicle without an areola, takes place if the person inoculated have previously received the infection of the smallpox, or if he be affected with some other contagious fever, during the process of vaccination.

“I observed the co-existence of an irregular vesicle, and the vaccine pustule, in a girl five years old, probably one of those who are not susceptible of the smallpox. She was first vaccinated without any perceptible effect, although six children of the same family had the regular vaccine disease by means of fluid taken from the person from whom she was vaccinated. The little girl was again vaccinated in both arms, about two months afterward, when she had the vaccine pustule from the puncture in the right arm, and from that in the left, a vesicle without any areola, and of an irregular form, one side of it being much more elevated than the other. The year following she was inoculated with recent variolous matter, but did not take the smallpox.

“Professed inoculators, I make no doubt, have observed other modifications of the inoculated vaccine disease. The irregular appearances above described, and represented by engravings, may serve to put those who have less experience, on their guard, and

there was much pain in the axilla, with feverish symptoms, and loss of appetite. From this time, the inflammation declined, and in four days, it wholly disappeared, leaving on the inoculated part, a horny scab, which did not fall off for some days.’ See Mr. Ring’s treatise, p. 711.

\* “See Dr. Jenner’s *Obs. M. and P. Journal*, for Aug. 1804. Mr. Hutchinson’s, April 1801. ‘The effect of cutaneous eruptions on the vaccine vesicle is frequent, not universal. Compare Dr. Wood’s and Mr. Creaser’s *Remarks, M. and P. Journal*, Feb. and April 1806.

induce them, when there is any deviation from the regular form and course of the vesicle, to remoculate at a future period.

“ In Dr. Woodville’s opinion, ‘ whenever vaccine inoculation excites a pustule of any kind, though it continue but one or two days, and should be succeeded by an ulcer, the inoculation is as effectual as where the tumour has proceeded in the most regular manner.’—Further experience has ascertained that neither the vaccine pustules nor ulcerations sufficiently protect the constitution from the smallpox, yet that in a few instances, matter taken from the pustule has communicated by inoculation the genuine vesicle, and that, in some, the vesicle on the sixth or seventh day succeeded, or took the place of the pustule,\* as if the patients had been inoculated from themselves. In the greatest number of cases, however, the vaccine pustule, on inoculation, produced a pustule of the same kind, and thus laid the foundation for a series of inefficient inoculations. Dr. Odier began to vaccinate at Geneva, with virus taken on threads from the arm of a nobleman who had previously had the smallpox. Twenty children were inoculated successively with this matter, and similarly affected. Their arms inflamed within eight hours, and afterwards suppurated abundantly, but with an exudation from beneath a thick crust. Fever supervened, with vomitings, and other symptoms, which, however, ceased in forty-eight hours. Seventeen of these children being afterwards inoculated with variolous matter, had the smallpox with different degrees of virulence, and three of them died, having taken the disorder by casual infection.

“ The effect of vaccination, when there are irregular vesicles

\* “ Mr. Ring’s Treatise, p. 668 ; p. 370, from Dr. Cappe ; and p. 941, from Dr. Sacco.—I may mention as an analogical fact, that in some cases of variolous inoculation, there are two successive eruptions. The first consists of large distinct pocks, without fever : in the second, which takes place on the ninth or tenth day after the first, the pustules are small and coherent, or sometimes confluent. With these cases I would rank that of Mr. King’s child noticed in the *Med. and Phys. Journal* for Nov. 1805, p. 405, and by Dr. Fraser. Instances of a similar irregularity in the eruption of the measles I have given elsewhere. See *Reports on Diseases in London*, p. 106.”

(p. 118) is different in different cases. They appear fully to secure some individuals from the infection of the smallpox, in others the constitution is but imperfectly guarded against the smallpox by these vesicles, the disease taking place after them, at different intervals, under a particular form.\*—I may add further, that when the fluid they contain is used for the purpose of inoculation, it sometimes produces an irregular, and at other times a genuine vesicle. According to Dr. Jenner, ‘The vaccine fluid, even in a pustule (vesicle) going through its course perfectly, if taken in its far advanced stages, is capable of producing varieties, which will be permanent, if we continue to vaccinate from it.’

“Mr. Mudge’s dissertation on the inoculated smallpox, affords an instance of an irregular and insufficient form of the smallpox thus perpetuated. In a series of inoculations, he says, ‘Thirty were inoculated with crude matter taken from the arm on the fifth day after inoculation, but, though the infection took place so as to produce, in each patient, a very large, inflamed, and prominent pustule, with matter in it, yet not one of them had any eruptive fever, or a single subsequent eruption on any part of the body.’——‘The matter which was in these pustules, having been used to inoculate others, produced on them exactly the same appearances, unattended also with either fever or smallpox.’ ‘The whole number being reinoculated with matter taken after the eruptive fever, the result was that every one of them had the eruptive fever and succeeding eruptions: in short, they had the smallpox in different degrees, but all in the usual way of inoculated patients.’

“Since the vaccine virus, compared with that of the smallpox, appears to be more delicate, and more liable to degenerate, or to fail in its operation from various causes (page 115), several practitioners are of opinion that the variolous is preferable to the vaccine inoculation, and that it may be conducted with equal

\* “Persons thus partially or imperfectly guarded seem only to take the disorder after repeated or long-continued exposure to infection.



safety. I need not at present recapitulate the advantages of vaccine inoculation, which thousands have attested. The salutary effects of this practice, under the proper regulations, being fully established should we now desist from it, because it is found to require greater nicety and attention than many persons at first believed necessary? A very different conclusion ought surely to be drawn from failures, which were not so much the effects of accident, mistake, or oversight in the early inoculators, as of inexperience in the business they had undertaken. During the years 1799, and 1800, vaccine inoculation was practised by ten or twelve thousand persons in the united kingdom, who had never seen the vaccine vesicle before they began to inoculate, nor could be acquainted with its different stages and appearances. The right inference, from the mistakes or failures above stated, and from the nicety of vaccine inoculation, is, that only those should be inoculators who have had a sufficient education, and who have particularly attended to the subject of vaccination.

“By an obvious collateral inference, we must be led to acknowledge the propriety of a strict examination of the persons inoculated between the 1st of Jan. 1799, and the 1st of Jan. 1802, and the necessity of re-inoculation in every doubtful case. In cities, and large towns, where medical practitioners have easy access to their friends and patients, the examination might be performed without much trouble, and, if a little address were employed, without exciting much alarm. I believe the scrutiny has, in some places, been already made; but my wish is, more particularly to impress the expediency of it on surgeons resident in small towns, and districts, remote from the original sources of vaccine inoculation. As they must, at first, have often received the fluid circuitously, they could not always be sure respecting its age and state, nor could they, being at that time without experience, know whether the appearances it produced were so decisive, that its effects would be adequate to the intended purpose. I do not by this observation mean to censure the gentlemen to whom it is addressed. Whatever credit we may allow ourselves in the metropolis, for skill, correct information, and local advantage, we must confess

that numerous mistakes and failures have occurred with us, some will say, more than in all the considerable towns of England taken together. Practitioners in the country having no resource but in their own sagacity, often acquire as much professional knowledge and experience as those who seem to have better opportunities. The most expert surgeon or physician, however, cannot at once see the whole extent of a new mode of practice or a new operation, or ascertain, otherwise than by repeated trials, whether it will be effective in every variety of circumstances and constitution. For this reason, I wish that practitioners throughout the country would, by revising their primary inoculations with a more experienced judgment, take care to ascertain the safety of those who have confided in them, and thus secure their own peace of mind; for what would their feelings be, if the smallpox, casually conveyed,\* should prove fatal to any of the persons whom they first persuaded to make trial of the new inoculation?"

[Willan on Vaccine Inoculation, p. 31.]

The fourth and last objection, viz. that the vaccinepock is productive of other diseases is refuted by the observations and reports of those best qualified to give an opinion on this subject. Such are the Royal Jennerian Society, the Vaccinepock Institution in London, and various other vaccine institutions in Great Britain and Ireland. Such also is Dr. Willan, whom we have already quoted very largely, and whose extensive practice in London, particularly in cutaneous diseases, entitle his remarks on this subject to peculiar credit. He says, "I have carefully examined, with different physicians and surgeons, various cases of

\* "This disease appears from time to time in the remotest vallies and townships of Britain, and makes a dreadful ravage. The interval seldom exceeds twelve years. Mr. Bryce informs us that the greater part of the children, in two parishes of Scotland, were vaccinated by persons not of the medical profession, and who were unacquainted with the vaccine disease: 'The result was, that the smallpox came among them soon afterwards, and every one thus inoculated was affected with that dreadful disease; while those few that had been inoculated by persons acquainted with the appearances in cowpox, entirely escaped.' Pract. Obs. p. 168."

cutaneous eruptions attributed to vaccination. Instead of the mange, or any eruption communicable from quadrupeds to the human skin, we constantly found diseases, which were known, and have been fully described, by medical writers, more than a thousand years ago, viz. the lepra, the dry and the humid tetter, the prurigo, the chronic nettle-rash, and the strophulus candidus; but more especially the dandriff, the favus, the crusta lactea, the scaldhead, and the ringworm.—Some persons maintain that if the inoculation of vaccine virus does not excite new eruptions on the skin, it, at least, increases the number of the cutaneous complaints with which we were before acquainted, and renders them more inveterate. My own experience would authorise me to contradict this assertion, but I shall perhaps refute it more satisfactorily by exhibiting the annexed lists, which Dr. Bateman, at my request, extracted from the Register of patients at the Public Dispensary in London:

	Total number of diseases.	Number of chronic cutaneous eruptions.
In the year 1797 . . . .	1730 . . . .	85
1798 . . . .	1664 . . . .	82
1804 . . . .	1915 . . . .	89
1805 . . . .	1974 . . . .	94

“ This table shews that the proportion of cutaneous eruptions to all other diseases, was the same before the publication of Dr. Jenner’s inquiry, as in the 6th and 7th year of vaccination.

“ The following observations by Mr. Charles Brandon Trye, Senior Surgeon to the Infirmary at Gloucester, afford a striking confirmation of the above statement.

“ 1. ‘ A more healthy description of human beings does not exist, nor one more free from chronic cutaneous impurities, than that which suffers most from cowpox, by reason of their being employed in dairies.

“ 2. ‘ The Gloucester Infirmary, one of the largest provincial hospitals, is situated in a county, in which accidental cowpox has been prevalent from time immemorial: many hundreds among the labouring people have had that cowpox since the establish-



ment of this institution, and that more severely than is generally the case in artificial vaccination ; and yet not a single patient, in half a century, has applied to the Infirmary for relief of any disease, local or constitutional, which he, or she, imputed or pretended to trace to the cowpox. And be it repeated and remembered, that the artificial in no respect differs from the accidental cowpox, except in being generally less virulent.'

"Glandular diseases are usual, and often immediate consequences, both of the natural and inoculated smallpox. In this respect, the vaccine, compared with variolous inoculation, has a decided advantage, being seldom succeeded by inflammation and suppuration of the glands. Among children of respectable families, I have not seen a single instance of scrophula, which could be fairly referred to the cowpox. The children of the poor are not affected with glandular swellings, immediately after vaccine inoculation, as they frequently are after the smallpox, measles, and scarlatina anginosa. Where scrophulous symptoms occur one, two, or three years after vaccination, we cannot surely, with justice, attribute them to it, since impure air, improper food, dirt, confinement, and virulent diseases, such as the lepra, scald-head, itch, and impetigo, so generally contribute to the production of glandular diseases in the lower class of people?"

[Willan on Vaccine Inoculation, p. 81.]

It remains for us to describe the methods which have been proposed to obviate the few evils, which may arise in the practice of vaccination. These evils are the two following, for there are not any others worthy consideration. The first is the risk of the inoculator's relying on imperfect vaccination. The second the risk which every individual incurs of his liability to smallpox a second time, or what is the same, of smallpox after cowpock.

As respects the first objection it is to be obviated in future by acquiring the requisite instructions, and by revaccinating in all cases, where there is the least irregularity. But it is fair to presume that we have in times past had our full share of cases of imperfect vaccination. We necessarily undertook the practice without any other instruction than that obtained from books ;

and the laws of our Commonwealth have prevented our frequent appeals to the smallpox as a test in doubtful cases, a practice, by which inoculators in other parts of the world were enabled to acquire knowledge on this subject. The only remedy is to revaccinate at least all those, respecting whom there is the least doubt. Few of us however can remember with accuracy all the cases which have been under our care, and the imperfect cases are most likely to have been among the first. Would it not then be proper to offer to revaccinate all our patients of the years 1800, 1801, and 1802, agreeably to the proposal made by the very excellent writer\* whom we have so often quoted.

The second may perhaps appear the greatest evil, since it would seem that all our caution may be insufficient to afford us absolute security against the smallpox. We have already stated that those, who have undergone variolous inoculation, are equally unsafe. But while this saves the credit of vaccination, it does not remove the evil. The risk is however so small that it may not to some persons appear to be worthy any remedy. But it seems proper to state what remedy there is, and leave it to the parties most interested to judge for themselves, whether they will adopt it.

The medical officers of the Original Vaccinepock Institution in London employ as a test to all their patients a second inoculation with vaccine matter. They give to each patient a certificate that he has undergone the vaccine disease, with a promise that if he should afterwards take the smallpox the institution will pay to him the sum of five guineas. But as the inoculators have five guineas at risk in each case, they always require that the patient should submit to this test before they give the certificate. If the test be of any use, the wisdom of this requisition will not be questioned. Is not the risk to every patient as important as that of five guineas to the inoculator? If it is, surely it is reasonable that every individual should have proffered to him the security, which this test will afford. The following extracts from the minutes of the Vaccinepock Institution will show on what ground

\* Dr. Willan.

this second inoculation is relied as a test of susceptibility or unsusceptibility of smallpox.

*Extracts from the minutes of the Original Vaccinepock Institution.*

“ Feb. 3, 1807. It having been intimated by several of the members of the committee of the College of Physicians for investigating the state of the vaccine practice, that they would be extremely glad of the opportunity of witnessing the trial of inoculating a certain number of persons with the variolous matter in one arm, and the vaccine in the other, after having undergone the cowpock, with the view of ascertaining the susceptibility for the one or the other of these ; it was proposed that at least twelve persons, before vaccinated at this institution, should be desired to attend on Saturday, February 14, for that purpose.”

[Med. & Chir. Rev. p. lxiv.

“ Tuesday, Feb. 17, at a weekly board :—

“ In a letter sent to the committee of the Royal College of Physicians by the medical establishment, on the subject of vaccination, it was proposed to submit to the decision, by experiment, the question—Whether a person, after cowpock inoculation, is not in the same state of susceptibility or unsusceptibility of the cowpock as of the smallpox, agreeably to the experience of this institution for several years back. For if the publick can be satisfied with regard to this fact, the test by inoculation with cowpock matter will then afford a proof of security equal to that by smallpox matter ; and, consequently, the practice of inoculation with variolous matter after the cowpock, which has been objected to as tending to the dissemination of that matter, will become unnecessary.

“ Accordingly, the following fellows of the college attended yesterday (Monday the 16th) for their private satisfaction, to see this question determined by experience ; namely, Dr. Ash, Dr. Heberden, Dr. Pemberton, and Dr. Warren.

“ The members of the medical establishment who conducted the experiments were, Mr. De Bruyn, Mr. Doratt, Mr. Payne, Dr. Pearson, and Dr. Shaw.



"The variolous matter used in the experiment was taken from the vesicle of the inoculated part of the arm of Mrs. Allen's child, 4, Knightsbridge, aged five months, the eleventh day from inoculation. It had been ill for the last two days, and eruptions were already coming out. There were two distinct vesicles in the parts inoculated, in the usual state at this period.

"The patient who furnished the cowpock matter was Mr. Holder's child, 10, Bateman's buildings, who had on the arm three most distinct cowpock vesicles, which were ascertained to be in an efficacious state by producing the cowpock in several subjects.

"The subjects of the trial were,

"1. Edward Baldock, aged ten years : three scars, now scarcely visible, were on the left arm, but had been very evident : inoculated at this institution Oct. 30, 1803.

"2. Charles Baldock, aged eight years : had one just perceived scar, but two others were now obliterated.

"3. Joseph Baldock, aged six years : three scars on one arm, and one on the other.

"4. Benjamin Baldock, aged five years : only one superficial scar remained from the former inoculation.

"5. Sarah Baldock, aged two years : two barely visible scars remained from the former inoculation.

"These five children of Mr. and Mrs. Baldock, residing at Palace Green, Kensington, were all in a state of good health.

"6. Elizabeth Mc Donald, aged six years : had three scars, distinct but very superficial, from the former inoculation.

"7. David Mc Donald, aged four years : had only one superficial scar from the former inoculation.

"8. Anne Mc Donald, aged three years : had one superficial scar from the former inoculation scarcely visible.

"These three were from the same family, at 1, Tufton street, Westminster : they had been inoculated at this institution October 30, 1803.

"9. William Mc Donald, brother of the three last mentioned children, aged eleven years, who had gone through the smallpox

when a year and a half old, happening to be present, he and the eight above named children were all inoculated by Mr. Doratt in the right arm, by three punctures with variolous matter, and in the left by three punctures with vaccine, immediately from the patients affording the matter present (except William Mc Donald, who, by mistake, was inoculated in the left arm with variolous matter, and in the right with vaccine.)

“There were also inoculated on this occasion, Anne, James, and Richard Hodgson, of 1, Wimpole-street, who had gone through the cowpock at this institution.

“10. Anne, aged three years, was inoculated with smallpox matter in three places in the right arm, and in the left in three places with cowpock matter.

“11. James, aged four years: had two deep scars on the left arm, and one on the right, from the former inoculation; was inoculated in three places in the left arm with smallpox matter, and in the right in three places with cowpock matter.

“12. Richard, aged five years: had three scars on the left arm from inoculation, and one on the right; was inoculated in three places in the left arm only with variolous matter, an objection being made to inoculating the other arm.

“These twelve subjects were directed to attend on Saturday, at one o'clock, at which time the gentlemen present proposed to meet again for the examination of the effects of the inoculation.”

“Second meeting, Saturday, Feb. 21, 1807.—Present, Dr. Ash, Mr. De Bruyn, Mr. Carpue, Dr. Clutterbuck, Mr. Payne, Dr. Pearson, Dr. Shaw, Dr. Warren.

“The vaccine matter inserted this day was from the child Shuker, ninth day after inoculation.

“The variolous matter was from Allen's eruptions of the seventh day.

“1st. Two new patients attended for trial who had been inoculated at this institution December, 1803; viz.

“13. Thomas Pearson, aged nine years. By three punctures in the right arm, variolous, and by three punctures in the left

arm, vaccine matter was inserted. Had one superficial scar from the former inoculation.

" 14. William Pearson, aged three years. Three punctures in the right arm received variolous matter, and three punctures in the left received vaccine. Had a superficial scar on each arm from inoculation formerly.

" 2d. The Hodgsons inoculated at the last meeting attended. Richard Hodgson had now in the left arm three pimples, not unlike the fourth day of inoculated smallpox or cowpock. No effect till yesterday.

" James Hodgson ill the day before yesterday ; to-day is recovered. Has three large pimples, which seem to be scabbing, on the right arm ; three pimples still more decidedly scabbing in the left arm.

" Anne did not attend ; but Mrs. Hodgson reported that there was no effect at all.

" 3d. Elizabeth Mc Donald. On the left arm were three pocks much like those of the former patients, Richard and James Hodgson ; on the right arm three larger pocks than on the other arm.

" Anne Mc Donald. The left arm bore three pocks much the same as the former ; on the right arm much the same pocks as the former : Anne's appeared infected the day after insertion.

" William Mc Donald. There were three pimples in a scabbing state in each arm, but less defined than the former subjects. The arms inflamed the next day after insertion. Quite well.

" 5th. The three following, inoculated at the former meeting, were examined.

" Edward Baldock. On the right arm were three pocks exactly like the fifth or sixth day of the cowpock, well defined. Left arm ; just marks of the punctures remain. There had been no inflammation of the arms.

" Charles Baldock. Right arm, three small pimples in the scabbing state. Left arm, three scabbing pimples much like the other. Quite well.

" Joseph Baldock. Right arm, three pimples like the former, but inflamed ; probably from scratching. Left, red marks only.



" Benjamin and Sarah Baldock did not attend.

" Third meeting, Thursday, Feb. 26, 1807.—Present, Dr. Ash, Mr. De Bruyn, Mr. Thompson Forster, Dr. Heberden, Dr. Nelson, Mr. Payne, and Dr. Pearson.

" The family of the Baldocks all attended, being the eleventh day after insertion.

" 1st. Edward Baldock. Right arm had three pocks in the inoculated part in a semi-purulent state, not very unlike ninth day smallpox.

" On the ninth and tenth days, it is said, there was much redness and inflammation round the part inoculated, but which is now totally gone off.

" Five or six days ago, complained of a swelling in the axilla of the right arm, with pain: now gone off. Matter was taken from these pocks upon glass for trial. The outline of the areola is barely visible.

" In the left arm the marks of the punctures are just visible; has had no pain of the axilla in that arm, nor of the shoulder. Was heavy, dull, and poorly, particularly on the seventh and eighth days, but was pretty well on the ninth, on which day the redness upon the arms was pretty considerable.

" Charles Baldock. On the right arm two of the three small scabs have fallen off; one, of the size of a pin's head, remains. There has been no redness of this arm. On the left arm scarcely any traces of the pimples now remain. No illness.

" Joseph Baldock. On the left arm three small scabs from the pimples. There has been no inflammation nor pain of the arm-pits. Right arm, only traces of the punctures left; pain of the arm-pits or shoulders on this side. No illness.

" Benjamin Baldock. Right arm, three extremely small scabbed pimples. Left arm, three ditto: no inflammation of the arm nor pain of the arm-pit. Was poorly on the seventh day, when a few fleabite like spots appeared, of which some now remain.

" Sarah Baldock. The traces of the three pimples upon each arm just remaining. No illness, and quite well.

" 2d. William Mc Donald, aged eleven years, who had had

the smallpox in the natural way nine years ago, by which he is distinctly but slightly scarred. The three pimples in each arm exactly alike. There has been no redness, pain, nor illness.

“ Elizabeth Mc Donald. Three very distinct marks in each arm from the punctures, and much alike. Those on the left arm are on the three scars from former inoculation. There has been no redness in either arm, nor pain of the arm-pits, nor illness.

“ David Mc Donald. Marks on each arm from the punctures, only more evident in the right arm than the left. No redness since the day after the insertion, nor any pain nor illness subsequently.

“ Anne Mc Donald. The right arm exhibits three scabbed pimples. On the left, three scabs as large have fallen off, and left three larger marks.

“ 3d. Thomas Pearson. Several days after insertion on the right arm were two distinct pimples only. There has been no redness. Left arm, two similar but smaller pimples.

“ William Pearson. Right arm, two elevated pimples, not unlike the third or fourth day variola or vaccine ; a third larger, with red irregular areola round it. On the left arm similar pimples to the former, but smaller. No inflammation nor redness, but ill ever since Saturday, the day of inoculation ; probably from cold.

“ 4th. The Hodgsons. Richard had three scabbing pocks, containing matter not like either cowpock or smallpox ; James, only small scabbed pimples in parts inoculated ; Anne, no traces of inoculated parts.

“ The following cases were reported, being relative to the question under determination.

“ Tuesday, Feb. 24, two boys, Robert Brush, nine years old, No. 3044, and James Brush, No. 3045, from 10, Margaret-street, Cavendish Square, having gone through the cowpock in the usual way, by inoculation at the Institution in January last, were inoculated in three places in the right arm with smallpox matter, and in three places in the left arm with vaccine.

“ Eleventh day, Friday 6th of March : James (13,) three

large scabbing pocks appeared on the left arm, unlike vaccine scabs ; and on the right, no effect from the insertion of variolous matter.

“ Robert Brush. On the right arm were three large scabbing pimples, much like those of his brother, but smaller. On the left arm no effects were perceived from the insertions.

“ Tuesday, 10th March, fifteenth day. James Brush : Three scabs on the left arm, unlike either vaccine or variolous. On the right arm no traces of the insertions.

“ Robert Brush : Two scabs on the right arm irregularly figured, otherwise like fifteenth day vaccine, although from variolous matter. Left arm, nothing seen from the insertions of vaccine matter.

“ *Conclusion.*—According to these trials, which serve to confirm several hundred others already instituted by this establishment, the constitution is alike susceptible or unsusceptible of the smallpox and cowpock ; of course, the matter of the latter may be relied upon as a test, as much as that of the former. However, as the local affection of the cowpock without constitutional disorder not unfrequently resembles the cowpock attended by constitutional affection ; and as, in a certain proportion of cases, the smallpox can take place after distinct cowpock, as well as the cowpock ; it has been asserted that a person is susceptible repeatedly of the cowpock, though not of the smallpox, and in this way the error may be explained.

“ *Remarks.*—1. From the preceding cases, it appears that neither the smallpox nor cowpock could be excited by insertion of what is esteemed the most efficacious matter, in thirteen persons who had undergone the cowpock about three or four years before, nor in two who had been vaccinated only a few weeks previously.

“ 2. A local affection, viz. a pimple which enlarged into an irregular-figured pock, or at least a larger pimple, was excited by the punctures with variolous matter in the arms of seven patients ; and in the same patients, the punctures with vaccine matter excited nearly similar pimples.



" 3. A local affection which was at first a pimple, but became an irregular-figured pock, was excited in the arms of three patients by the insertion of variolous matter ; and by the insertions of vaccine matter in the same patients, only very small pimples were produced.

" In one patient, a local affection was excited in one arm by vaccine matter, but not in the other by variolous.

" 4. In three patients, no local affection at all was produced, or at least red marks only of two or three day's duration.

" 5. Neither constitutional disorder, nor affection of the axillary glands, was produced in any of the subjects of trial, excepting one on the seventh and eighth day.

" This patient on the eleventh day had three pocks from the variolous matter, not unlike inoculated smallpox, in a semi-purulent state, attended by the characteristic areola ; while on the left arm, from the vaccine matter, were only red marks.

" 6. One patient, inoculated by three punctures with variolous matter only, had three irregular-figured pocks excited, two of which afforded rather permanent scabs.

" 7. One patient, who had undergone the natural smallpox, had three pimples excited in each arm, all much alike, by the cowpock and variolous matter.

" 8. In some cases the local affection was more considerable from the variolous than from the vaccine matter, but in none more from the vaccine than the variolous.

" 9. The local affection, both from the variolous matter and vaccine, sometimes resembles the cowpock, but never the regular variolous pock of the inoculated part."

[Med. and Chir. Review, vol. 14. p. lxxxii.]

Opinions similar to those here maintained were long since advanced by Mr. Ring, and admitted by many vaccinists in England. The experiments related ought at least to add to the inducement to revaccinate all those who underwent the cowpock in 1800, 1801, and 1802. It would indeed be proper to extend the offer of revaccination, or of testing with vaccine matter, to all whom we have heretofore vaccinated ; and to state to those

who may hereafter be vaccinated the advantages of this test. In employing this test we ought to introduce the vaccine matter into at least four different places.

The committee are aware that few persons in this country are prepared to hear from this society that the vaccine disease is not in all cases a perfect security against the smallpox ; and they presume it will be feared by some that suggestions of this sort, which must accompany any remedy that shall be proposed, may deter our fellow-citizens from submitting to vaccination, and thus deprive us of the security, which this practice will undoubtedly afford. But the committee feel assured that this society cannot desire to make any statement on this subject, which is not perfectly accordant with truth ; and that the friends of vaccination can have no interest other than that of diffusing a most important blessing under such precautions, that it shall not be alloyed by any future disappointments. To the committee it appears that the advantages of vaccination are, under the circumstances they state, sufficiently decided to justify the expectations of any reasonable inquirer. The cowpock does not produce any sufferings in the subject of it, which are worthy consideration, and it does not in any case put life at risk. The precautions which are proposed go only to obviate an evil, which would not occur once in a thousand cases.

As respects the practice of vaccination in this commonwealth the committee regret to state that it has been much less extensive, than the welfare of the community requires. Although the laws and customs long since established ordinarily prevent the prevalence of smallpox among us,—from which the community have and do derive most abundant advantages,—yet it has been found necessary at times to permit this disease to be introduced into our large towns ; that is, when its inevitable occurrence has occasioned many individuals to be exposed to its contagion. As the cowpock cannot be communicated except by inoculation, there is no inconvenience to the community in the practice of that inoculation. Could we destroy in every individual the susceptibility of smallpox by this benign remedy, we

should prevent even the occasional prevalence of that disease among us—an event which can never take place without a most injurious interruption of business, great expense, trouble and anxiety to every family concerned in it ; and, what has usually happened on these occasions, a most lamentable proportion of deaths among those who undergo the disease.\*

From the statements and opinions contained in the foregoing report the committee are induced to propose the following resolutions, as declaratory of the sentiments of this society ; viz.

First—That in the opinion of this society persons who undergo the cowpock are thereby rendered as incapable of being affected by the virus of smallpox, as if they had undergone the latter disease.

Second—That it is be feared that in the early and even in some of the late practice of inoculating for the cowpock, the disease may not have been produced in the most perfect manner, and particularly in cases, where the inoculators have not been well instructed in this practice, nor been accustomed to observe the appearances of cutaneous diseases.

Third—That the most perfect and absolute security is to be derived from subsequent inoculation ; and in all cases in which the operation was performed before inoculators had sufficient experience on this subject, as in the years 1800, 1801 and 1802, it is indispensably necessary to ascertain the security by this test.

Fourth—That it be and it hereby is recommended by this Society, that all persons who have been vaccinated, especially at the period alluded to above, call on those who inoculated them to perform a second inoculation ; for which service the fellows of this society will not charge any additional fee.

\* In 1792, when inoculation for smallpox was permitted in Boston, the deaths were more than two in a hundred of the number inoculated. This great mortality is easily explained, when it is remembered that half a town were inoculated at once without regard to age or circumstances of health, and that many of them had not any such advantages as are to be desired in respect to situation and attendance.



If the foregoing resolutions be adopted by the Society, the Committee recommend that the Recording Secretary be directed to publish the same in four newspapers in the town of Boston.

All which is respectfully submitted,

Signet,

JOHN WARREN,  
A. DEXTER,  
JAMES JACKSON,  
JOHN C. WARREN, } Committee.

*AT the annual meeting of the MASSACHUSETTS MEDICAL SOCIETY, held June 1, 1808, the foregoing report was read; and after some observations it was voted unanimously that the said report should be accepted, and that the resolutions therein proposed should be adopted.*

JOHN C. WARREN, Recording Secretary.



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---

**TABLE OF CONTENTS**

**AND**

**INDEX**

**TO THE FIRST VOLUME OF MEDICAL PAPERS OF THE MASSA-  
CHUSETTS MEDICAL SOCIETY,**

Ending with the Year 1809.

---

1840

1841

1842

1843

1844

1845

1846

1847

1848

1849

1850



# TABLE OF CONTENTS.

## CONTENTS OF NUMBER I.

### FIRST SERIES.

[This volume being composed of several pamphlets, not paged in a continued series, it has been thought expedient in arranging the Table of Contents and Index to conform the paging to the several pamphlets, each pamphlet constituting a separate series.]

PREFACE . . . . .	Page 3
Act of Incorporation, ( <i>original</i> ) . . . . .	8
A List of Fellows . . . . .	12
Honorary Members . . . . .	13
Officers of the Massachusetts Medical Society, elected June, 1789 . . . . .	13

### COMMUNICATIONS.

#### ARTICLE I.

An account of the Weather, and of the Epidemics at Salem, in the county of Essex, for the year 1786. To which is added, a Bill of Mortality, for the same year. By Edward A. Holyoke, M. D. A. A. S. and Fellow of the Massachusetts Medical Society . . . 17

#### ARTICLE II.

An Account of the Ulcerated Sore Throat, as it appeared in the town of Dighton, county of Bristol, in 1785, and 1786. By Hon. William Baylies, A. M. A. A. S. and Fellow of the Massachusetts Medical Society. 41

#### ARTICLE III.

Experiments made with the common Cow-Parsnip, (*sphondylium vulgare hirsutum*. Park. C. B.) in cases

A

of Epilepsy. By the late Joseph Orne, A. M. A. A. S. and Fellow of the Massachusetts Medical Society	Page. 48
--	-------------

## ARTICLE IV.

An account of the successful treatment of a Paralysis of the lower Limbs, occasioned by a Curvature of the Spine. By Nathaniel W. Appleton, A. M. A. A. S. and Fellow of the Massachusetts Medical Society	56
--	----

## ARTICLE V.

Remarks upon the superior advantages of covering with the skin, parts recently exposed. By the late Dr. Edward Wyer, Fellow of the Massachusetts Medical Society	59
--	----

## ARTICLE VI.

A case of Empyema, successfully treated by the operation. By Isaac Rand, Esq. Vice President of the Massachusetts Medical Society	66
---	----

## ARTICLE VII.

Observations on the Hydrocephalus Internus. By Isaac Rand, jun. A. M. and Fellow of the Massachusetts Medical Society	69
---	----

## ARTICLE VIII.

An account of a preternatural obstruction in the Vagina. By Dr. Joseph Osgood, Fellow of the Massachusetts Medical Society	85
--	----

## ARTICLE IX.

Curious facts respecting Worms. By Thomas Welsh, A. M. and Fellow of the Massachusetts Medical Society	87
--	----

## CONTENTS.

v  
Page.

### ARTICLE X.

- A case of Calculus in the Ureter, together with another of the sudden growth of the Stone, consequent upon the introduction of a foreign body into the Bladder. By Hon. William Baylies, A. M. A. A. S. and Fellow of the Massachusetts Medical Society. . . . 90

### ARTICLE XI.

- An experiment for determining the expediency of the Sigaultian Operation. By the late Joseph Orne, A. M. A. A. S. and Fellow of the Massachusetts Medical Society. . . . . 93

### ARTICLE XII.

- An account of an Aneurism in the Thigh, perfectly cured by the operation, and the use of the lower Limb preserved. By Thomas Kast, A. M. and Fellow of the Massachusetts Medical Society . . . . 96

### APPENDIX.

- Extracts from an Essay on the Uterine Hæmorrhage which precedes the delivery of the full grown Fœtus. By Edward Rigby, Member of the Corporation of Surgeons in London . . . . . 99
- An account of the disorder occasioned by drinking cold Water in hot Weather. By Benjamin Rush, M. D. 115
- An account of the external use of Arsenic in the cure of Cancers. By the same . . . . . 117
- An account of the efficacy of common Salt in the cure of Hæmoptysis. By the same . . . . . 121
- A case of Hæmoptysis, in a Letter from Mr. Jones, Surgeon, at Birmingham, G. B. to Dr. Duncan, at Edinburgh . . . . . 123
- On Incontinence of Urine. From Manning's Modern Improvements in the Practice of Physic . . . 124



	Page.
Extract of a Letter from Dr. Hamilton, of Lynn Regis, to Dr. Duncan, at Edinburgh, giving an account of a successful method of treating Inflammatory Diseases, by mercury and opium . . . . .	125

## DISCOURSE.

Observations on Phthisis Pulmonalis, and the use of the  
Digitalis purpurea in the treatment of that disease ;  
with practical remarks on the use of the Tepid Bath.  
By Isaac Rand, M. D. A. A. and S. H. Soc. and Pre-  
sident of the Massachusetts Medical Society.

---

## CONTENTS OF NUMBER II. PART I.

## SECOND SERIES.

List of Officers, for the year 1806.

## ARTICLE I.

A Medical Discourse on several Narcotic Vegetable  
Substances, read before the Massachusetts Medical  
Society, at their Annual Meeting, June 4th, 1806. By  
Joshua Fisher, M. D. Vice-President of the Society 1

## ARTICLE II.

An account of a case of Ruptured Uterus. By Oliver  
Prescott, jun. A. M. and Fellow of the Massachusetts  
Medical Society. . . . . 13

## ARTICLE III.

A case of Compound Dislocation of the Tibia, at the  
ankle-joint, accompanied with a Fracture, and loss of  
part of the Fibula, and likewise with a Fracture of the  
Femur in two places. By Richard Hazeltine, Fellow  
of the Massachusetts Medical Society . . . . . 24

## CONTENTS.

vii

Page.

### ARTICLE IV.

- Narrative of a case of preternatural Retention of Urine,  
in consequence of external injury. By James Tha-  
cher, Fellow of the Massachusetts Medical Society 35

### ARTICLE V.

- History of a Wound of the Femoral Artery. By John  
C. Warren, Fellow of the Massachusetts Medical  
Society . . . . . 40

### ARTICLE VI.

- Some Observations on Worms infesting the human body.  
Communicated to the Essex Southern District Medi-  
cal Society, July 1, 1806. By Joshua Fisher, M. D.  
Vice-President of the Massachusetts Medical Society 49

---

## CONTENTS OF NUMBER II. PART II.

### THIRD SERIES.

#### ARTICLE I.

- Observations on the Lymphatic Distention of the lower  
Extremities of Women, while in the puerperal state.  
By Dr. Edward Wyer. . . . . 1

#### ARTICLE II.

- The History of a Retroverted Uterus. By Edward  
Augustus Holyoke, M. D. . . . . 13

#### ARTICLE III.

- Account of the effect of a Thread round a Child's Neck.  
By John Bartlett, of Roxbury . . . . . 19

#### ARTICLE IV.

- An account of an Extravasated Tumour on the Labium  
Pudendi, soon after delivery. By the late Dr. Os-  
good, of Andover . . . . . 23

	Page.
ARTICLE V.	
History of an Hæmorrhage from a Rupture of the inside of the left Labium Pudendi. By the late Dr. Nathaniel W. Appleton . . . . .	24
ARTICLE VI.	
Case of Tetanus, from the puncture of a Tendon in the Foot; cured by amputation. By Dr. Josiah Bartlett, of Charlestown . . . . .	26
ARTICLE VII.	
A remarkable extra-Uterine case. By Dr. George Os- good, of Andover: to which is subjoined, another case of the same kind. . . . .	30
ARTICLE VIII.	
Case of strangulated Crural Hernia, operated on accord- ing to the method of Don Antonio Gimbernat, with some observations on the treatment of Hernia. By John C. Warren . . . . .	44
ARTICLE IX.	
Case of Calculi in the Bladder of a Boy. By Dr. Josiah Bartlett, of Charlestown . . . . .	52
ARTICLE X.	
On the vesicating properties of the Potatoe Fly. By Dr. John Gorham . . . . .	55
ARTICLE XI.	
A case of Schirrous Testis cured by Electricity. By Matthias Spaulding, of Amherst, N. H. . . . .	66
Report of a Committee of the Counsellors . . . . .	67
Medical Intelligence and Notices . . . . .	70
List of Fellows . . . . .	79
Honorary Members . . . . .	87



## INDEX.

---

[As the Medical Papers communicated to the Massachusetts Medical Society were published in three pamphlets, paged with three several series of numbers, it is necessary, for the sake of easier reference to any particular article, to point out the page of the first, second, or third series, where such article may be found.]

### A

	Page.	Series.
ABSCCESS in the thigh, interesting case of . . .	61	I.
Account of the weather and epidemics at Salem, for 1786 . . . . .	17	I.
of the effect of a thread round a child's neck . . . . .	19	III.
of an extravasated tumour on the labium pudendi soon after delivery . . .	22	III.
of a case of ruptured uterus . . . . .	13	II.
Act of incorporation, ( <i>original</i> ) . . . . .	8	I.
Adams, Mr. Michael, discovers a complete mam- moth . . . . .	75	III.
Amalgam of tin and quicksilver, an excellent ver- mifuge, and method of preparing it . . .	51	II.
Analysis of the Balltown mineral water . . .	70	III.
Aneurism in the thigh, operation for an . . .	96	I.
Anthelmintic medicines, observations on . . .	49	II.
Appleton, Dr. Nathaniel W. communicates, a case of paralysis of the lower limbs, caused by a curvature of the spine . . .	56	I.
a history of an hæmorrhage from a rup- ture of the inside of the left labium pudendi . . . . .	24	III.
Arsenic, use of in cancers . . . . .	117	I.
Arteries secrete pus. See <i>Dr. Rand's Discourse</i> , <i>p. 6th, at the end of</i> . . . . .		I.

	Page.	Series.
<b>B</b>		
Balltown mineral waters, analysis of . . . . .	70	III.
Bartlett, Dr. John, communicates an account of the effect of a thread round a child's neck . . . . .	19	III.
Bartlett, Dr. Josiah, communicates, a case of tetanus, from the puncture of a tendon in the foot . . . . .	26	III.
a case of calculi in the bladder of a boy . . . . .	52	III.
Bath, tepid, practical remarks on the use of the. <i>See Dr. Rand's Discourse at the end of the first series of pages.</i>		
warm, in Hernia . . . . .	50	III.
Baylies, Hon. William, communicates, on ulcerated sore throat . . . . .	41	I.
a case of calculus <i>in uretere</i> . . . . .	90	I.
a case of sudden growth of the stone . . . . .	90	I.
Bill of Mortality for Salem, 1786 . . . . .	39	I.

## C

Calculus in the bladder, case of . . . . .	92	I.
ureter, case of . . . . .	90	I.
Calculi in the bladder of a boy . . . . .	52	III.
Cancers, use of arsenic in, . . . . .	117	I.
Candidates for admission into the Massachusetts Medical Society, necessary qualifications of . . . . .	67	III.
Certificate of admission into the Massachusetts Medical Society, form of . . . . .	69	III.
Chincough, Dr. Holyoke's method of treating the, in 1786 . . . . .	25	I.
Cicuta, use of, in scrophulous affection of the abdominal viscera . . . . .	9	II.
<i>in phthisis pulm. scroph.</i> . . . . .	10	II.
in jaundice . . . . .	11	II.
Cold water, disorder occasioned by drinking it in warm weather . . . . .	115	I.
<i>Colica pictorum</i> . . . . .	37	I.

# INDEX.

xi

	Page.	Series.
Colica, opium in . . . . .	5	II.
Columbo root, good in dyspepsia . . . . .	27	I.
Communications, proper subjects for, pointed out . . . . .	5 I. and 73	III.
Compound dislocation at the ankle joint, of the tibia, &c. . . . .	24	II.
Cow-parsnip, use of in epilepsy . . . . .	48	I.
Curvature of the spine, causing paralysis of the lower limbs . . . . .	56	I.

## D

Davy, Mr. experiments on the alkalis . . . . .	74	III.
Digitalis purpurea, its use in the treatment of phthisis pulmonalis. <i>See Dr. Rand's Discourse at the end of the first series of pages.</i>		
Discourse, Dr. Rand's, consisting of observations on phthisis pulmonalis, and the use of the digitalis purpurea, in the treatment of that disease; with practical remarks on the use of the tepid bath. <i>See the end of series</i> . . . . .		I.
Discourse, Dr. Fisher's, on several narcotic vegetable substances . . . . .	1	II.
Diseases, acute, less frequent than formerly . . . . .	39	I.
chronic, more frequent than formerly, particularly phthisis pulmonalis . . . . .	39	I.
in Salem, in 1786 . . . . .	40	I.
Dislocation of the tibia, compound, at the ankle joint . . . . .	24	II.
Disorder occasioned by drinking cold water in warm weather . . . . .	115	I.
Dyspepsia, columbo root beneficial in . . . . .	27	I.

## E

Electricity efficacious in a case of schirrous testis . . . . .	66	III.
Empyema, a case of . . . . .	66	I.
Epidemics and weather at Salem, account of the, for 1786 . . . . .	17	I.

## B



	Page.	Series.
Epilepsy, use of cow-parsnip in . . . . .	48	I.
use of stramonium in . . . . .	7	II.
Extra-uterine cases . . . . .	30 and 41	III.

## F

Fellows, list of . . . . .	12 I. and 79	III.
Femoral artery, wound of . . . . .	96 I. and 40	II.
Fever. See Intermittent, Puerperal, Typhus.		
Fisher, Joshua M. D. his discourse on several nar- cotic vegetable substances . . . . .	1	II.
communicates observations on worms in- festing the human body . . . . .	49	II.
Fowler's mineral solution, good to destroy the tae- nia . . . . .	53	II.

## G

Gimbernat, Don Antonio, his method of operating in strangulated crural hernia . . . . .	44	III.
Godon, Mr. his mineralogical lectures . . . . .	73	III.
discovers porphyry and manganese, works iron and coal mines . . . . .	ib.	
Gorham, Dr. John, communicates on the vesicat- ing properties of the potatoe fly . . . . .	55	III.
Guinea worm . . . . .	32	I.

## H

Hamilton, Dr. Robert, on mercury and opium in inflammatory diseases . . . . .	125	I.
Hazeltine, Dr. Richard, communicates a case of compound dislocation of the tibia at the ankle joint . . . . .	24	II.
Hæmoptysis, common salt in . . . . .	121	I.
case of, by Mr. William Jones . . . . .	123	I.
Hæmorrhage from a rupture of the inside of the labium pudendi . . . . .	24	III.
uterine . . . . .	99	I.

# INDEX.

xiii

	Page.	Series.
Heat, (mean) of the year 1786 . . . . .	36	I.
Hernia, case of strangulated crural, successfully treated . . . . .	44	III.
injection of tobacco in . . . . .	49	III.
observations on the treatment of . . . . .	47	III.
opium in . . . . .	50	III.
warm bath in . . . . .	ib.	
Holyoke, Edward A. M. D. communicates, an ac- count of the weather, epidemics, bill of mortality, &c. for Salem, 1786 . . . . .	17	I.
a history of a retroverted uterus . . . . .	13	III.
Honorary members . . . . .	13 I.	87 III.
Hydrocephalus internus . . . . .	69	I.
Hydrophobia, one instance of . . . . .	27	I.

## I

Ileus, two instances of, fatal . . . . .	22	I.
Incontinence of urine . . . . .	124	I.
Incorporation, act of . . . . .	8	I.
Inquiries concerning vaccination, and vaccina in- digena . . . . .	71 and 72	III.
Intelligence and notices, medical, . . . . .	70	II.
Intermitting fevers, remark on their greater rarity in Salem . . . . .	38	I.

## J

Jones, Mr. William, relates a case of hæmoptysis . . . . .	123	I.
--	-----	----

## K

Kast, Dr. Thomas, communicates an account of an aneurism in the thigh, cured by an operation . . . . .	96	I.
---	----	----

## L

Labium pudendi, an account of an extravasated tu- mour on . . . . .	22	III.
hæmorrhage from . . . . .	24	III.

	Page.	Series.
Epilepsy, use of cow-parsnip in . . . . .	48	I.
use of stramonium in . . . . .	7	II.
Extra-uterine cases . . . . .	30 and 41	III.

## F

Fellows, list of . . . . .	12 I. and 79	III.
Femoral artery, wound of . . . . .	96 I. and 40	II.
Fever. See Intermittent, Puerperal, Typhus.		
Fisher, Joshua M. D. his discourse on several narcotic vegetable substances . . . . .	1	II.
communicates observations on worms infesting the human body . . . . .	49	II.
Fowler's mineral solution, good to destroy the tænia . . . . .	53	II.

## G

Gimbernat, Don Antonio, his method of operating in strangulated crural hernia . . . . .	44	III.
Godon, Mr. his mineralogical lectures . . . . .	73	III.
discovers porphyry and manganese, works iron and coal mines . . . . .	ib.	
Gorham, Dr. John, communicates on the vesicating properties of the potatoe fly . . . . .	55	III.
Guinea worm . . . . .	32	I.

## H

Hamilton, Dr. Robert, on mercury and opium in inflammatory diseases . . . . .	125	I.
Hazeltine, Dr. Richard, communicates a case of compound dislocation of the tibia at the ankle joint . . . . .	24	II.
Hæmoptysis, common salt in . . . . .	121	I.
case of, by Mr. William Jones . . . . .	123	I.
Hæmorrhage from a rupture of the inside of the labium pudendi . . . . .	24	III.
uterine . . . . .	99	I.



# INDEX.

xiii

	Page.	Series.
Heat, (mean) of the year 1786 . . . . .	36	I.
Hernia, case of strangulated crural, successfully treated . . . . .	44	III.
injection of tobacco in . . . . .	49	III.
observations on the treatment of . . . . .	47	III.
opium in . . . . .	50	III.
warm bath in . . . . .	ib.	
Holyoke, Edward A. M. D. communicates, an account of the weather, epidemics, bill of mortality, &c. for Salem, 1786 . . . . .	17	I.
a history of a retroverted uterus . . . . .	13	III.
Honorary members . . . . .	13 I. 87	III.
Hydrocephalus internus . . . . .	69	I.
Hydrophobia, one instance of . . . . .	27	I.

## I

Ileus, two instances of, fatal . . . . .	22	I.
Incontinence of urine . . . . .	124	I.
Incorporation, act of . . . . .	8	I.
Inquiries concerning vaccination, and vaccina indigena . . . . .	71 and 72	III.
Intelligence and notices, medical, . . . . .	70	III.
Intermitting fevers, remark on their greater rarity in Salem . . . . .	38	I.

## J

Jones, Mr. William, relates a case of hæmoptysis . . . . .	123	I.
--	-----	----

## K

Kast, Dr. Thomas, communicates an account of an aneurism in the thigh, cured by an operation . . . . .	96	I.
--	----	----

## L

Labium pudendi, an account of an extravasated tumour on . . . . .	22	III.
hæmorrhage from . . . . .	24	III.

	Page.	Series.
List of fellows . . . . .	12	I. and 79 III.
Lymphatic distention of the lower extremities of puerperal women, observations on . . . . .	1	III.

## M

Mammoth, a complete, discovered . . . . .	75	III.
Members, honorary . . . . .	13	I. and 87 III.
Mercury and opium, use of in inflammatory diseases	125	I.
Michaux, Mr. travels through the United States	74	III.
Mortality, bill of, for Salem, for 1786 . . . . .	39	I.

## N

Narcotic vegetable substances, discourse on several of the . . . . .	1	II.
Nyctalopia, . . . . .	23	I. 33 I.

## O

Officers for 1789 . . . . .	13	I.
Officers for 1804, at the end of Dr. Rand's Dis- course, immediately preceding . . . . .		II.
for 1806, on the first leaf . . . . .		II.
Operation for strangulated crural hernia . . . . .	45	III.
for an aneurism of the crural artery . . . . .	96	I.
for a wounded crural do. . . . .	40	II.
Opium and mercury in inflammatory diseases . . . . .	125	I.
in cholera . . . . .	5	II.
in colica pictorum . . . . .	ib.	
in large doses, necessary as an anodyne . . . . .	4	II.
in hernia . . . . .	50	III.
remarks on its powers and effects . . . . .	2	II.
in tetanus . . . . .	4	II.
with calomel in colic. pict. . . . .	5	II.
Orne, Dr. Joseph, communicates, an experiment for determining the expediency of the si- gaultian operation . . . . .	93	I.
on the use of cow-parsnip in epilepsy. . . . .	48	I.

# INDEX.

xv

	Page.	Series.
Osgood, Dr. Joseph, communicates, an account of a preternatural obstruction in the vagina	85	I.
of an extravasated tumour on the labium pudendi, soon after delivery . . . . .	22	III.
Dr. George, communicates a remarkable extra-uterine case . . . . .	30	III.

## P

Paralysis of the lower limbs occasioned by a curva- ture of the spine . . . . .	56	I.
Pertussis, Dr. Holyokes method of treating, in 1786	25	I.
Pharmacopœia of the Massachusetts Medical Society . . . . .	72	III.
Phthisis Pulmonalis, observations on. <i>See Dr.</i> <i>Rand's Discourse at the end of the first series of</i> <i>pages.</i>		
Potatoe Fly, on the vesicating properties of the	55	III.
Preface . . . . .	3	I.
Prescott, Dr. Oliver, jun, communicates a case of ruptured uterus . . . . .	13	II.
Puerperal fever, seldom met with in Salem . . . . .	39	I.

## Q

Qualifications, necessary, in candidates for admis- sion into the Massachusetts Medical Society . . . . .	67	III.
--	----	------

## R

Rand, Isaac, Esq. communicates a case of empyema	66	I.
Isaac, M. D. his discourse on phthisis pul- monalis, &c. <i>See at the end of the first</i> <i>series of pages.</i> communicates observations on hydroceph- alus internus . . . . .	69	I.
Remark on the advantages of considerable loss of blood in cases of injury . . . . .	33	II.



	Page.	Series.
Remark on the advantages of opening abscesses by <i>puncture</i> only . . . . .	33	II.
on the advantages of compression in the obliteration of sinuses . . . . .	34	II.
Remarks upon the superior advantages of covering with the skin, parts recently exposed . . . . .	59	I.
Remarkable extra-uterine cases . . . . .	30 III. 41	III.
Report of a committee of the counsellors . . . . . on vaccination.	67	III.
Rickets . . . . .	36	I.
Rigby, Mr. Edward, on uterine hæmorrhage . . . . .	99	I.
Rush, Benjamin, M. D. on the disorder occasion- ed by drinking cold water in warm weather . . . . .	115	I.
on common salt in hæmoptoe . . . . .	121	I.
on arsenic in cancers . . . . .	117	I.

## S

Salem, weather and diseases in, 1786 . . . . .	17	I.
bill of mortality for, in 1786 . . . . .	39	I.
Salt, common, in hæmoptysis . . . . .	121	I.
Schirrous testis, case of, cured by electricity . . . . .	66	III.
Scurvy, one instance of . . . . .	30	I.
seldom occurs in Salem . . . . .	39	I.
Seaman, Valentine, M. D. his analysis of Balltown mineral water . . . . .	70	III.
Sigaultian operation, an experiment for determin- ing the expediency of the . . . . .	93	I.
Sore-throat, ulcerated, as it appeared in Dighton, in 1785, and 1786 . . . . .	41	I.
Spaulding, Dr. Matthias, his case of schirrous testis, cured by electricity . . . . .	66	III.
Subjects, proper for communications, pointed out . . . . .	5 I. 73	III.
Strammonium, use of in epilepsy . . . . .	7	II.
Strangulated crural hernia, a case of, with observa- tions on the treatment of hernia . . . . .	44	III.

# INDEX.

xvii

Page. Series.

## T

Tepid bath, practical remarks on the use of the.

*See Dr. Rand's Discourse, at the end of the first series of pages.*

Tetanus, case of, from a puncture of a tendon in

the foot . . . . . 26 III.

opium in . . . . . 4 II.

Thacher, Dr. James, communicates a case of preternatural retention of urine . . . . . 35 II.

Thread, account of the effect of a, round a child's neck . . . . . 19 III.

Tibia, compound dislocation of, at the ankle joint . 24 II.

Tobacco, injection of, in hernia . . . . . 49 III.

Tumour, extravasated, on the labium pudendi, account of . . . . . 22 III.

Typhus mitior and gravior, remark on their greater rarity in Salem . . . . . 38 I.

## U

Ulcerated sore-throat, in the town of Dighton, in

1785, and 1786 . . . . . 41 I.

Urine, incontinence of . . . . . 124 I.

preternatural retention of . . . . . 35 II.

Uterus, hæmorrhage from . . . . . 99 I.

retroverted, cases of . . . . . 13 III.

ruptured, cases of . . . . . 13 II.

## V

Vaccination, report on.

Vagina, an account of a preternatural obstruction in 85 I.

Vermifuges, observations on . . . . . 49 II.

## W

Warm clothing, good effects of. *See Dr. Rand's*

*Discourse, page 16, at the end of the first series of pages.*

	Page.	Series.
Warren, John C. M. D. communicates, a history of a wound of the femoral artery . . . . .	40	II.
a case of strangulated crural hernia, operated on with success, with observations on the treatment of hernia . . . . .	44	III.
Weather, and epidemics, account of, at Salem, for 1786. . . . .	17	I.
Welsh, Dr. Thomas, communicates curious facts respecting worms . . . . .	87	I.
Worms, curious facts respecting . . . . .	87	I.
infesting the human body, some observations on . . . . .	49	II.
small, discharged in the urine . . . . .	54	II.
Worm-medicines, observations on . . . . .	49	II.
Wound of the femoral artery . . . . .	96	I. 40 II.
Wyer, Dr. Edward, communicates, remarks upon the superior advantages of covering with the skin, parts recently exposed . . . . .	59	I.
observations on the lymphatic distention of the lower extremities of women while in the puerperal state . . . . .	51	III.

P. S. Between the first and second series of pages, will be found Dr. I. Rand's Discourse, read before the Massachusetts Medical Society, June 6th, 1804.



